NIGERIA CIVIL AVIATION REGULATIONS

NIGERIAN CIVIL AVIATION AUTHORITY

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NIGERIA CIVIL AVIATION REGULATIONS

PART 1—GENERAL POLICIES, PROCEDURES AND DEFINITIONS

BACKGROUND

The Nigeria Civil Aviation Regulations (Nigeria CAR) was first promulgated in 2006 to provide national requirements in line with the provisions of the Civil Aviation Act, 2006 and for standardized operational procedures, equipments and infrastructure including safety management and training system in conformity with Standard and Recommended Practices (SARPs) contained in the Annexes to the Chicago Convention.

The Nigeria CAR 2006 was presented in 18 parts comprising of the following :

Part 1—General Policies and Definition ;
Part 2—Personnel Licensing ;
Part 3—Aviation Training Organization ;
Part 4—Registration and Marking ;
Part 5—Airworthiness ;
Part 6—Approved Maintenance Organization ;
Part 7—Instrument and Equipment ;
Part 8—Operations ;
Part 9—Air Operator Certification and Administration ;
Part 10—Commercial Air Transport by Foreign Air Carrier within Nigeria ;
Part 11—Commercial Aircraft Operations used for Specialized Services (Aerial Works) ;
Part 12—Aerodrome Regulations ;
Part 14—Air Navigation Services ;
Part 15—Carriage of Dangerous Goods by Air ;
Part 16—Environmental Protection Regulations ;
Part 17—Aviation Security ; and
Part 18—Offences.

The Nigerian CAR 2006 (Parts 1 to 11) was amended to bring the Regulations into conformity with ICAO Model Regulations and issued as Nigeria Civil Aviation Regulations (Nig. CARs) 2009, while Parts 12 to 18 of the 2006 Regulations continued in force. Parts 12 to 18 were subsequently repealed by the Nigeria Civil Aviation Regulation, Volume II, 2012. Economic and Consumer Protection Regulations were also promulgated for the first time in Nigeria.

The Nigeria Civil Aviation Regulations 2015 has been updated to incorporate the most recent ICAO amendments to the SARPs and now contains a new Part 20 to conform with the ICAO *Annex* 19 on Safety Management .

The Nigeria Civil Aviation Regulations 2015 (Nig. CARs 2015) comprises of 20 Parts to wit :

Part 1—General Policies, Procedures and Definitions ;
Part 2—Personnel Licensing ;
Part 3—Approved Training Organization ;
Part 4—Aircraft Registration and Marking ;
Part 5—Airworthiness ;
Part 6—Approved Maintenance Organization ;
Part 7—Instrument and Equipment ;
Part 8—Operations ;
Part 9—Air Operator Certification and Administration ;
Part 10—Commercial Air Transport by Foreign Air Operators within Nigeria ;
Part 11—Aerial Works ;
Part 12—Aerodrome Regulations ;
Part 14—Air Navigation Services Regulations ;
Part 15—The Safe Transport of Dangerous Goods by Air Regulations ;
Part 16—Environmental Protection Regulations ;
Part 17—Aviation Security Regulations ;
Part 18—Economic Regulations :
Part 19—Consumer Protection Regulations ; and
Part 20—Safety Management.

Each Part to these Regulations contains Implementing Standards which provides detailed requirements that support the intent of a regulation in the Part and unless otherwise indicated have the legal force and effect of the referring regulation.

Part 1 of Nig. CARs 2015 which contains rules of construction of the Regulations, general administrative rules governing testing, licences, certificates, investigative and enforcement procedures, exemptions and the definitions used in these Regulations shall be of general application to all the Parts in Nig. CARs 2015.

These Regulations constitute the third amendments to the Nigerian Civil Aviation Regulations since its promulgation in November 2006.

MADE this 7th day of December, 2015.

CAPT. MUHTAR USMAN
Director-General
Nigeria Civil Aviation Authority

Introduction

Part 1 sets forth the General Policies, Procedures and Definitions. It further sets forth the basic rules of construction and application of the Regulations, the rules governing the administration of testing, licenses, certifications, exemptions and investigative and enforcement procedures.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 1—GENERAL POLICIES, PROCEDURES AND DEFINITIONS

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PART 1—IMPLEMENTING STANDARDS

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NIGERIA CIVIL AVIATION REGULATIONS

PART 1—GENERAL POLICIES, PROCEDURES AND DEFINITIONS

1.1. Rules of Construction

1.1.1.1.—(*a*) Pursuant to Section 30 of the Civil Aviation Act, 2006, the Nigeria Civil Aviation Authority (hereinafter referred to as "The Authority") hereby makes the following Regulations.

Promulgation and Rules of Construction.

Throughout these Regulations the following word usage applies :

(1) *Shall.*—indicates a mandatory requirement.

(2) The words "*no person may...*" or "*a person may not...*"—mean that no person is required, authorised, or permitted to do an act described in a Regulation.

(3) *May.*—indicates that discretion can be used when performing an act described in a Regulation.

(4) *Will.*—indicates an action incumbent upon the Authority.

(5) *Includes.*—means "includes but is not limited to".

(6) *Approved.*—means the Authority has reviewed the method, procedure, or policy in question and issued a formal written approval.

(7) *Acceptable.*—means the Authority has reviewed the method, procedure, or policy and has neither objected to nor approved its proposed use or implementation.

(8) *Prescribed.*—means the Authority has issued written policy or methodology which imposes either a mandatory requirement, if the written policy or methodology states "shall," or a discretionary requirement if the written policy or methodology states "may".

1.1.1.2.—(*a*) These Regulations shall apply to all persons operating or maintaining the following—

Applicability.

(1) Nigeria registered aircraft ;

(2) Aircraft registered in another Contracting State that are operated by a person licensed by Nigeria, and must be maintained in accordance with the standards of the aircraft State of Registry, wherever that maintenance is performed ;

(3) Aircraft of other Contracting States operating in Nigeria.

(*b*) Regulations addressing persons certificated under any Part of these Regulations apply also to any person who engages in an operation governed by any Part of these Regulations without the appropriate certificate, licence, operations specification, or similar document required as part of the certification.

(*c*) Regulations addressing general matters establish minimum standards for all aircraft operated in Nigeria. Specific standards applicable to the holder of a certificate shall apply if they conflict with a more general Regulation.

(*d*) Foreign air operators who conduct commercial air transport into, from, or within Nigeria, shall be governed by the provisions of the Operations Specification issued by the Authority, and by those provisions in Parts 7, 8, and 10 that specifically address commercial air transport. Regulations that address AOC holders apply only to operators certificated by Nigeria.

(*e*) Every person performing duties in civil aviation shall observe and comply with the requirements of these regulations, rules, orders and directives issued thereunder.

(*f*) Every person performing duties in civil aviation who violates these regulations, rules, orders and directives issued thereunder is subject to the penalties provided in the Table of Sanctions under this part.

(*g*) Any person other than a person performing duties in civil aviation who violates these regulations, rules, orders, directives issued thereunder is subject to such penalties as may be imposed by the Authority.

(*h*) Every person performing duties in civil aviation shall observe and comply with the requirements of the Schedule of Fees prescribed by the Authority from time to time.

Organisation of Regulations.

1.1.1.3.—(*a*) These Regulations are subdivided into five hierarchical categories :

(1) *Part* refers to the primary subject area.

(2) Subpart refers to any subdivision of a Part.

(3) Section refers to any subdivision of a Subpart.

(4) Subsection refers to the title of a Regulation and can be a subdivision of a Subpart or Section.

(5) Paragraph refers to the text describing the Regulations. All paragraphs are outlined alphanumerically in the following hierarchical order: (*a*), (1), (*i*), (A).

(*b*) Acronyms used within each Part are defined at the beginning of those Parts, and if a definition is supplied, a note will indicate the Part where the definition is located.

(*c*) Notes appear in Subsections to provide exceptions, explanations, and examples to individual requirements.

(*d*) Regulations may refer to Implementing Standards, which provide additional detailed requirements that support the purpose of the subsection, and unless otherwise indicated, have the legal force and effect of the referring Regulation. The rules of construction, Subsection 1.1.1.1, apply to Implementing Standards.

1.2. General Administrative Rules Governing Testing, Licences, and Certificates

1.2.1.1.—(*a*) *Pilot licence* :

Display and Inspection of Licences and Certificates.

(1) To act as a pilot of a civil aircraft of Nigeria registry, a pilot shall have in his or her physical possession or readily accessible in the aircraft a valid pilot licence or special purpose authorisation issued under these Regulations.

(2) To act as a pilot of a civil aircraft of foreign registry within Nigeria, a pilot shall be the holder of a valid pilot licence, and have the pilot licence in his or her physical possession or readily accessible in the aircraft.

(*b*) *Flight instructor licence* : A person who holds a flight instructor licence shall have that licence, or other documentation acceptable to the Authority, in that person's physical possession or readily accessible in the aircraft when exercising the privileges of that licence.

(*c*) *Other airman licence* : A person required by any part of these Regulations to have an airman's licence shall have it in their physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that licence.

(*d*) *Medical certificate* : A person required by any part of these Regulations to have a current medical certificate shall have it in their physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that certificate.

(*e*) *Approved Training Organisation* (*ATO*) *Certificate*: Each holder of a certificate shall display that certificate in a place in the school that is normally accessible to the public and that is not obscured.

(*f*) *Aircraft Certificate of Registration* : Each owner or operator of an aircraft shall carry the aircraft certificate of registration on the aircraft and have it available for inspection.

(g) *Aircraft Certificate of Airworthiness* : Each owner or operator of an aircraft shall display that certificate in the cabin of the aircraft or at the entrance to the aircraft flight deck.

(*h*) *Approved Maintenance Organisation* (*AMO*) *Certificate* : Each holder of an AMO certificate shall prominently display that certificate in a place accessible to the public in the principal business office of the AMO.

(*i*) *Aerial Work Certificate* : Each owner or operator of an aircraft engaged in aerial work shall carry that certificate or a copy of that certificate on the aircraft and have it available for inspection.

(*j*) *Air Operator Certificate* : Each owner or operator of an aircraft engaged in commercial air transport shall carry the air operator certificate or a certified true copy of that certificate on the aircraft and a copy of the operations specifications applicable to that aircraft type, and have them available for inspection.

(*k*) *Inspection of Licence* : Each person who holds an airman or crewmember licence, medical certificate, or authorisation required by these Regulations shall present it for inspection upon a request from—

(1) The Authority ; or

(2) Any national or local law enforcement officer.

Change of Name.

1.2.1.2.—(*a*) A holder of a licence or certificate issued under these Regulations may apply to change the name on a licence or certificate. The holder shall include with any such request—

(1) The current licence or certificate ; and

(2) A copy of the marriage licence, court order, or other document verifying the name change.

(*b*) The Authority will return to the airman the documents specified in paragraph (*a*) of this subsection.

Change of Address.

1.2.1.3.—(*a*) The holder of an airman licence or certificate, or approved training organisation certificate who has made a change in permanent mailing address may not, after 30 days from that date, exercise the privileges of the licence or certificate unless the holder has notified the Authority in writing of the new permanent mailing address, or current residential address if the permanent mailing address includes a post office box number.

Replacement of a Lost or Destroyed Airman Licence or Medical Certificate or Knowledge Test Report.

1.2.1.4.—(*a*) An applicant who has lost or destroyed one of the following documents issued under these Regulations shall request a replacement in writing from the office designated by the Authority :

(1) An airman licence.

(2) A medical certificate.

(3) A knowledge test report.

(*b*) The airman or applicant shall state in the request letter—

(1) The name of the airman or applicant ;

(2) The permanent mailing address, or if the permanent mailing address includes a post office box number, the person's current residential address ;

(3) The social security number or equivalent national identification number ;

(4) The date and place of birth of the airman or applicant ; and

(5) Any available information regarding the—

(*i*) Grade, number, and date of issuance of the licence, and the ratings, if applicable ;

(*ii*) Date of the medical examination, if applicable ; and

(*iii*) Date the knowledge test was taken, if applicable.

(*c*) After receiving a letter or an email or facsimile from the Authority confirming that the lost or destroyed document was issued, an airman may carry the letter or facsimile in lieu of the lost or destroyed document for up to 60 days pending the airman's receipt of a duplicate document.

Falsification, Reproduction, or Alteration of Applications, Licences, Certificates, Logbooks, Reports, or Records.

1.2.1.5.—(*a*) No person may make or cause to be made concerning any licence, certificate, rating, qualification, or authorisation, application for or duplicate thereof, issued under these Regulations :

(1) Any fraudulent or intentionally false statement ;

(2) Any fraudulent or intentionally false entry in any logbook, record, or report that these Regulations require, or used to show compliance with any requirement of these Regulations ;

(3) Any reproduction for fraudulent purpose ; or

(4) Any alteration.

(*b*) Any person who commits any act prohibited under paragraph (*a*) of this section may have his or her airman licence, rating, certificate, qualification, or authorisation revoked or suspended.

Voluntary Surrender or Exchange of Licence.

1.2.1.6.—(*a*) The holder of a licence or certificate issued under these Regulations may voluntarily surrender it for :

(1) Cancellation ;

(2) Issuance of a lower grade licence ; or

(3) Another licence with specific ratings deleted.

(*b*) An applicant requesting voluntary surrender of a licence shall include the following signed statement or its equivalent : 'This request is made for my own reasons, with full knowledge that my (insert name of licence or rating, as appropriate) may not be reissued to me unless I again pass the tests prescribed for its issuance.

Prohibition on Performance During Medical Deficiency.

1.2.1.7.—(*a*) A person who holds a current medical certificate issued under these Regulations shall not act in a capacity for which that medical certificate is required while that person :

(1) Knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the required medical certificate ; or

(2) Is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the requirements for the required medical certificate.

Psychoactive Substance Testing and Reporting.

1.2.1.8.—(*a*) Any person who performs any function requiring a licence, rating, qualification, or authorisation prescribed by these Regulations directly or by contract for a certificate holder under the provisions of these Regulations may be tested for usage of psychoactive substances.

(*b*) Chemicals considered psychoactive substances are listed in IS 1.2.1.8.

(*c*) Any person subject to these Regulations who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorise the release of the test results requested by the Authority may—

(1) be denied any licence, certificate, rating, qualification, or authorisation issued under these Regulations for a period of up to 1 year after the date of that refusal ; or

(2) have his or her licence, certificate, rating, qualification, or authorisation issued under these Regulations suspended or revoked.

(*d*) Any person subject to these Regulations who refuses to submit to a test to indicate the presence of narcotic drugs, marijuana, or depressant or stimulant drugs or substances in the body, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorise the release of the test results requested by the Authority may—

(1) be denied any licence, certificate, rating, qualification, or authorisation issued under these Regulations for a period of up to 1 year after the date of that refusal ; or

(2) have his or her licence, certificate, rating, qualification, or authorisation issued under these Regulations suspended or revoked.

(*e*) Any person subject to these Regulations who is convicted for the violation of any local or national statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, or depressant or stimulant drugs or substances, may—

(1) be denied any licence, certificate, rating, qualification, or authorisation issued under these Regulations for a period of up to 1 year after the date of final conviction ; or

(2) Have his or her licence, certificate, rating, qualification, or authorisation issued under these Regulations suspended or revoked.

1.3. INVESTIGATIVE AND ENFORCEMENT PROCEDURES

1.3.1. Investigative Procedures.

Reports of Violations.

1.3.1.1.—(*a*) Any person who knows of a violation of the Civil Aviation Act or these Regulations or orders thereunder should report it to the Authority as soon as is reasonably practicable.

(*b*) Each report made under this section together with any other information the Authority may have that is relevant to the matter reported will be reviewed by the Authority to determine the nature and type of any additional investigation or enforcement action the Authority will take.

Investigations-General.

1.3.1.2.—(*a*) Under the Civil Aviation Act, and other enabling laws, the Director General may conduct investigations, hold hearings, issue subpoenas, require the production of relevant document, records, and property, and take evidence and depositions.

Formal Complaints.

1.3.1.3.—(*a*) Complaints submitted to the Authority under section 1.3.1.1.(*a*) shall be in a form and manner prescribed by the Authority.

1.3.2. ADMINISTRATIVE ACTIONS

Administrative Action.

1.3.3.1.—(*a*) If it is determined that a violation or an alleged violation of the Civil Aviation Act, or an order or Regulation issued under it, is appropriate for administrative action, the Authority may take administrative action by one of the following :

(1) A "*Warning Notice*" that shall recite available facts and information about the incident or condition and indicate that it may have been a violation ; or

(2) A "*Letter of Correction*" which confirms the Authority's decision in the matter and states the necessary corrective action the alleged violator has taken or agreed to take. If the agreed corrective action is not fully completed, formal certificate action may be taken in accordance with 1.3.3.3.

(*b*) An administrative action under this section does not constitute a formal adjudication of the matter.

1.3.3. LEGAL ENFORCEMENT ACTIONS

Civil Penalties.

1.3.3.1.—(*a*) Any person, other than a person conducting an operation in commercial air transport or international commercial air transport, who violates any provision of the Civil Aviation Act, these Regulations, or any order issued thereunder, is subject to a civil penalty imposed by the Authority in accordance with the provisions of the Civil Aviation Act and these Regulations.

(*b*) Any person conducting an operation in commercial air transport or international commercial air transport, who violates any provision of the Civil Aviation Act, these Regulations, or any order issued thereunder, is subject to a civil penalty imposed by the Authority in accordance with the provisions of the Civil Aviation Act and these Regulations.

(*c*) Civil penalties may be assessed instead of or in addition to any licence or certificate action described in 1.3.3.3.

(*d*) Guidelines for civil penalties and certificate actions are listed in IS 1.3.3.

Criminal Penalties.

1.3.3.2.—(*a*) The Civil Aviation Act establishes criminal penalties for any person who knowingly and willfully violates specified provisions of the Act, or any Regulation or order issued thereunder.

(*b*) If the Authority becomes aware of a possible violation of any criminal provision of the Civil Aviation Act that is under the jurisdiction of another Nigerian Government Agency, the Authority shall immediately report it to the appropriate Agency in a manner prescribed by both government agencies.

(*c*) Guidelines for criminal penalties and certificate actions are listed in IS. 1.3.3

Certificate Action.

1.3.3.3.—(*a*) Suspension or revocation of a licence or certificate for violation of the Regulations.

(1) The holder of any licence or certificate issued under these Regulations who violates any provision of the Civil Aviation Act, any amendment thereto, or any Regulation or order issued thereunder, is subject to suspension or revocation of the licence or certificate, in accordance with the provisions of the Civil Aviation Act and these Regulations.

(2) Any licence or certificate issued under these Regulations ceases to be effective, if it is surrendered, suspended, or revoked.

(3) The holder of any licence or certificate issued under these Regulations that has been suspended or revoked shall return that licence to the Authority when requested to do so by the Authority.

(*b*) Re-examination or re-inspection of a certificate or licence for lack of qualification.

(1) Under the Civil Aviation Act and these Regulations, the Authority may re-inspect any civil aircraft, aircraft engine, propeller, appliance, air operator, school, or approved maintenance organisation, or any civil airman holding a certificate or licence issued by the Authority.

(2) If, as a result of that re-inspection or re-examination, or any other investigation made by the Authority, the Authority determines that a lack of qualification exists, and that safety in air transport and the public interest requires it, the Authority may issue an order to amend, modify, suspend, or revoke the licence or certificate in whole or in part.

(3) Procedures for the re-examination of personnel licences, ratings, authorisations, or certificates are set forth in Part 2 of these Regulations.

(*b*) *Notice and opportunity to be heard*.

Unless safety in air transport requires immediate action, prior to a final determination under this section 1.3.3, the Authority shall provide the person with an opportunity to be heard as to why such certificate or licence should not be amended, modified, suspended, or revoked.

(*c*) *Re-application after revocation*.

Unless otherwise authorised by the Authority, a person whose licence, certificate, rating, or authorisation has been revoked may not apply for any licence, certificate, rating, or authorisation for 1 year after the date of revocation.

(*d*) *Re-application after suspension*.

Unless otherwise authorised by the Authority, a person whose licence, certificate, rating, or authorisation has been suspended may not apply for any licence, certificate, rating, or authorisation during the period of suspension.

Detention of Aircraft.

1.3.3.4.—(*a*) As provided by the Civil Aviation Act 2006, an aircraft that is involved in a violation for which a civil penalty has been imposed or may be imposed on its owner or operator may be subject to detention by the Authority in accordance with enforcement procedures set forth by the Authority.

Appeals.

1.3.3.5.—Any person who disagrees with the administrative or legal enforcement actions imposed by the Authority under the provisions of these Regulations may appeal for a review within seven (7) days from the date of the imposition of the sanction and shall follow the procedure in 1.10.

1.4. Exemptions

Applicability.

1.4.1.—(*a*) This subpart prescribes procedures for the request, review, and denial or issuance of exemptions from the Nigeria Civil Aviation Regulations.

General.

1.4.2.—(*a*) Any interested person may apply to the Authority for an exemption from a requirement of the Regulations.

(*b*) Only the Authority may issue exemptions, and no person may take or cause to be taken any action not in compliance with these Regulations unless the Authority has issued an applicable exemption to the person.

(*c*) Exemptions will only be granted in extraordinary circumstances.

1.4.3. Requirements for Application

General.

1.4.3.1.—(*a*) Applications for an exemption shall be submitted at least 60 days in advance of the proposed effective date, to obtain timely review.

(*b*) The request must contain the applicant's :

(1) Name.

(2) Street address and mailing address, if different.

(3) Telephone number.

(4) Fax number if available.

(5) E-mail address if available.

(6) Agent for all purposes related to the application.

(*c*) If the applicant is not a citizen or legal resident of Nigeria, the application must specify a Nigerian agent for service.

Substance of the Request for Exemption.

1.4.3.2.—(*a*) Applications must contain the following :

(1) A citation of the specific requirement from which the applicant seeks relief.

(2) Description of the type of operations to be conducted under the proposed exemption.

(3) The proposed duration of the exemption.

(4) An explanation of how the exemption would be in the public interest, that is, benefit the public as a whole.

(5) A detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the Regulation in question.

(6) A review and discussion of any known safety concerns with the requirement, including information about any relevant accidents or incidents of which the applicant is aware.

(7) If the applicant seeks to operate under the proposed exemption outside of Nigerian airspace, the application must also indicate whether the exemption would contravene any provision of the Standards and Recommended Practices of the International Civil Aviation Organisation (ICAO).

(*b*) Notwithstanding 1.4.3.1, an applicant may seek emergency processing of an exemption request.

(1) If the applicant seeks emergency processing, the application must contain supporting facts and reasons why the application was not timely filed, and the reason(s) it is an emergency.

(2) The Authority may deny an application if the Authority finds that the applicant has not justified the failure to apply in a timely fashion.

1.4.4. Review, Publication, and Issue or Denial of the Exemption

1.4.4.1.—(*a*) The Authority will review the application for accuracy and compliance with the requirements of 1.4.3.

(*b*) If the application appears on its face to satisfy the provisions of 1.4.3 and the Authority determines that a review of its merits is justified, the Authority will publish a detailed summary of the application for comments and specify the date by which comments must be received by the Authority for consideration.

(*c*) If the filing requirements of 1.4.3 have not been met, the Authority will notify the applicant and take no further action until the applicant complies with the requirements of 1.4.3.

Evaluation of the Request.

1.4.4.2.—(*a*) After initial review, if the filing requirements have been satisfied, the Authority shall conduct an evaluation of the request to include :

(1) A determination of whether an exemption would be in the public interest ;

(2) A determination, after a technical evaluation, of whether the applicant's proposal would provide a level of safety equivalent to that established by the Regulation ;

(*i*) If it appears to the Authority that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis.

(3) A determination, if the applicant seeks to operate under the exemption outside of Nigerian airspace, of whether a grant of the exemption would contravene the applicable ICAO Standards and Recommended Practices.

(4) An evaluation of comments received from interested parties concerning the proposed exemption.

(5) A recommendation, based on the preceding elements, of whether the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

Notification of Determination.

1.4.4.3.—(*a*) The Authority shall notify the applicant by letter and publish a detailed summary of its evaluation and decision to grant or deny the request. The summary shall specify the duration of the exemption and any conditions or limitations to the exemption.

(*b*) If the request is for emergency relief, the Authority will publish the application and/or the Authority's decision as soon as possible after processing the application.

(*c*) If the exemption affects a significant population of the aviation community of Nigeria the Authority shall also publish the summary in its aeronautical information publications.

Extension of the Exemption to Other Interested Parties.

1.4.4.4.—(*a*) If the Authority determines that an exempted should be granted, other persons or organizations may apply to the Authority to be included in the relief granted.

(*b*) Such applications shall be in accordance with the requirements of 1.4.3.

(*c*) If the Authority determines that the request merits extension of the exemption to the applicant, it shall notify the applicant by letter, specifying the duration of the exemption, and listing any additional conditions that may pertain to the applicant that are not addressed in the underlying exemption.

1.5. DEFINITIONS

For the purpose of these regulations, the following definitions shall apply :

(1) *Accelerate-Stop Distance Available* (*ASDA*)—The length of the take-off run available plus the length of stopway, if provided.

(2) *Acceptable*—A rule of construction in Part 1.1.1.1 (*a*)(7) that means the Authority has reviewed the method, procedure, or policy and has neither objected to nor approved its proposed use or implementation.

(3) *Acceptance Checklist*—A document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met.

(4) *Accepting Unit*—Air traffic control unit next to take control of an aircraft.

(5) *Accident*—Definition used in a safety management context. An occurrence associated with the operations of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft

with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which :

(*i*) a person is fatally or seriously injured as a result of : being in the aircraft, or direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew ; or

(*ii*) the aircraft sustains damage or structural failure which : adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome) ; or

(*iii*) the aircraft is missing or is completely inaccessible.

Note 1: For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.

Note 2 : An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

Note 3 : The type of unmanned aircraft system to be investigated is addressed in 5.1 of *Annex* 13.

Note 4 : Guidance for the determination of aircraft damage can be found in Attachment F of *Annex* 13.

(6) *Accountable Manager.*—The person acceptable to the Authority who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Authority, and any additional requirements defined by the operator. The accountable manager may delegate in writing to another person within the organisation, the day to day management but not the overall approval management responsibility.

(7) *Accredited Representative.*—As relating to an aircraft accident, a person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another party.

(8) *Accredited Medical Conclusion.*—The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

(9) *Acrobatic Flight.*— Manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

(10) *Acts of unlawful interference.*—These are acts or attempted acts such as to jeopardise the safety of civil aviation and transport including but not limited to :

(*i*) Unlawful seizure of aircraft in flight ;

(*ii*) Unlawful seizure of aircraft on the ground ;

(*iii*) Hostage-taking on board an aircraft or on aerodromes ;

(*iv*) Forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility ;

(*v*) Introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes ;

(*vi*) Communication of false information as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility.

(11) *ADS Agreement.*—An ADS reporting plan that establishes the conditions of ADS data reporting (i.e., data required by the air traffic services or control unit and frequency of ADS reports that have to be agreed to prior to the provision of the ADS services).

(12) *ADS Contract.*—A means by which the terms of an ADS agreement will be exchanged between the ground system and the aircraft, specifying under what conditions ADS reports would be initiated, and what data would be contained in the reports.

Note : The term “ADS contract” is a generic term meaning variously, ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode. Ground forwarding of ADS reports may be implemented between ground systems.

(13) *Advisor.*—As relating to an aircraft accident, a person appointed by a State on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation. (ICAO Annex 13).

(14) *Advisory Airspace* An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

(15) *Advisory Route*.—A designated route along which air traffic advisory service is available.

(16) *Aerial Work*.—An aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

(17) *Aerodrome*.—A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

(18) *Aerodrome Beacon*.—Aeronautical beacon used to indicate the location of an aerodrome from the air.

(19) *Aerodrome Certificate*.—The certificate to operate an aerodrome issued by the Authority subsequent to the approval of the aerodrome operator's manual.

(20) *Aerodrome control service*.—Air traffic control service for aerodrome traffic.

(21) *Aerodrome Control Tower*.—A unit established to provide air traffic control service to aerodrome traffic.

(22) *Aerodrome Elevation*.—The elevation of the highest point of the landing area.

(23) *Aerodrome Facilities and Equipment*.—Facilities and equipment, inside or around the boundaries of an aerodrome, that are constructed or installed and maintained for the arrival, departure, and surface movement of aircraft.

(24) *Aerodrome Operator's Manual*.—The operations manual that forms part of the application for an aerodrome certificate pursuant to these regulations, including any amendments thereto accepted and approved by the Authority.

(25) *Aerodrome Operator*.—The owner or provider of an aerodrome that is certified for operations by the Authority.

(26) *Aerodrome Operating Minima*.—The limits of usability of an aerodrome for :

(*i*) Takeoff, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions ;

(*ii*) Landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation ;

(*iii*) Landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) ; and

(*iv*) Landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/ height (MDA/H) and, if necessary, cloud conditions.

(27) *Aerodrome Reference Point*.—The designated geographic allocation of an aerodrome.

(28) *Aerodrome Traffic Zone*.—An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

(29) *Aeronautical Experience*.—Pilot time obtained in an aircraft, approved flight simulation training device for meeting the training and flight time requirements of these regulations.

(30) *Aeronautical Fixed Service* (*AFS*).—A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

(31) *Aeronautical Information Publication* (*AIP*).—A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

(32) *Aeronautical Mobile Service*.—A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

(33) *Aeronautical Station*.—A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

(34) *Aeronautical Telecommunication Station*.—A station in the aeronautical telecommunication service.

(35) *Aeronautical Product*.—Any aircraft, aircraft engine, propeller, or subassembly, appliance, material, part, or component to be installed thereon.

(36) *Aeronautical Study*.—A study of an aeronautical problem to identify possible solutions and select a solution that is acceptable without degrading safety.

(37) *Aeroplane*.—A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(38) *Aeroplane Flight Manual*.—A manual, associated with the certificate of airworthiness, containing limitations within which the aeroplane is to be considered airworthy, and instructions and information necessary to the flight crew members of the safe operation of the aeroplane.

(39) *Aeroplane Reference Field Length.*—The minimum field length required for take-off at maximum certified take-off mass, sea level, standard atmospheric conditions, still air, and zero runway slope, as shown in the appropriate aeroplane flight manual prescribed by the certifying authority or equivalent data from the aeroplane manufacturer.

(40) *Afterburning*.—A mode of engine operation wherein a combustion system fed (in whole or part) by vitiated air is used.

(41) *Agricultural Aircraft Operation.*—The operation of an aircraft for the purpose of—

(*i*) Dispensing any economic poison ;

(*ii*) Dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control ; or

(*iii*) Engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation, but not including the dispensing of live insects.

(42) *Aided Night Flight.*—For a flight in which a pilot uses night vision goggles, the portion of the flight in which the pilot uses night vision goggles to maintain visual surface reference.

(43) *Airborne Collision Avoidance System* (*ACAS*).—An aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

(44) *Airborne image recorder* (*AIR*).—A device that uses a combination of cameras to collect and record information that reflects the status of various parts of the aircraft (internal and external).

(45) *Air-ground Communication.*—Two-way communication between aircraft and stations or locations on the surface of the earth.

(46) *Air Navigation Facility.*—Any facility used in, available for use in, or designed for use in aid of air navigation, including aerodromes, landing areas, lights, any apparatus or equipment for disseminating weather information, for signalling, for radio directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing and takeoff of aircraft.

(47) *Air Operator.*—Any organisation which undertakes to engage in domestic commercial air transport or international commercial air transport, whether directly or indirectly or by a lease or any other arrangement. (Law).

(48) *Air Operator Certificate* (*AOC*).—A certificate authorising an operator to carry out specified commercial air transport operations.

(49) *Air Traffic*.—All aircraft in flight or operating on the manoeuvring area of an aerodrome.

(50) *Air Traffic Control Clearance.*—Authorisation for an aircraft to proceed under conditions specified by an air traffic control unit.

Note : For convenience, the term "air traffic control clearance" is frequently abbreviated to "clearance" when used in appropriate context. The abbreviated term "clearance" may be prefixed by the words: taxi, takeoff, departure, en route, approach or landing, to indicate the particular portion of flight to which the air traffic control clearance relates.

(51) *Air Traffic Control* (*ATC*) *Facility.*—A building holding the persons and equipment responsible for providing ATC services (e.g., airport tower, approach control, centre). May also be called air traffic control unit.

(52) *Air Traffic Control Service.*—A service provided within advisory airspace that promotes the safe, orderly, and expeditious flow and separation of air traffic at aerodromes and during the approach, departure, and en route environments including aircraft that are operating on IFR flight plans. Also can be called air traffic advisory service or air traffic service (ATS).

(53) *Air Traffic Service* (*ATS*).—See Air traffic control service.

(54) *Air Traffic Services Airspaces.*—Airspaces of defined dimensions alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

Note : ATS airspaces are classified as Class A to G.

(55) *Air Traffic Services Reporting Office*.—A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Note : An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

(56) *Air Traffic Services Unit.*—A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

(57) *Aircraft.*—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(58) *Aircraft Accident.*—An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which :

(*i*) A person is fatally or seriously injured as a result of—

(*a*) Being in the aircraft ;

(*b*) Direct contact with any part of the aircraft, including parts which have become detached from the aircraft ; or

(*c*) Direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew.

(*ii*) The aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or the aircraft is missing or is completely inaccessible.

Note 1—For statistical uniformity only, an injury resulting in death within thirty days of the date of the date of the accident is classified as a fatal injury by ICAO.

Note 2—An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

(59) *Aircraft Avionics.*—A term designating any electronic device – including its electrical part—for use in an aircraft, including radio, automatic flight control and instrument systems.

(60) *Aircraft Category.*—Classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon, airship, powered-lift.

(61) *Aircraft Certificated for Single-pilot Operation.*—A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

(62) *Aircraft Certificated for Multi-pilot Operation.*—A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of two pilots.

(63) *Aircraft Component.*—Any component part of an aircraft up to and including a complete powerplant and/or any operational/emergency equipment.

(64) *Aircraft Data Recording System.*—A device or devices that use a combination of data providers to collect and record parameters that reflect the state and performance of an aircraft.

(65) *Aircraft Engine.*—Any engine used, or intended to be used, for propulsion of aircraft and includes all parts, appurtenances, and accessories thereof other than propellers.

(66) *Aircraft Operating Manual.*—A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems, and other material relevant to the operation of the aircraft.

Note : The aircraft operating manual is part of the operations manual.

(67) *Aircraft Piracy.*—Any actual or attempted seizure or exercise of control, by force or violence, or by any other form of intimidation, with wrongful intent, of an aircraft within the jurisdiction of Nigeria.

(68) *Aircraft required to be operated with a Co-Pilot.*—A type of aircraft that is required to be operated with a co-pilot as specified in the flight manual or by the air operator certificate.

(69) *Aircraft Stand.*—A designated area on an apron intended to be used for parking an aircraft.

(70) *Aircraft Technical Log.*—Documentation for an aircraft that includes the maintenance record for the aircraft and a record for each flight made by the aircraft. The aircraft technical log is comprised of a journey records section and a maintenance section.

(71) *Aircraft-type of.*—All aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

(72) *Airframe.*—The fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of a powerplant, and landing gear of an aircraft and their accessories and controls.

(73) *Airman.*—This term refers to—

(*i*) Any individual who engages, as the person in command or as pilot, aircraft maintenance engineer, or member of the crew, or who navigates an aircraft while the aircraft is underway ;

(*ii*) Any individual in charge of the inspection, maintenance, overhauling, or repair of aircraft, , aircraft engines, propellers, or appliances ; or (*iii*) Any individual who serves in the capacity of flight operations officer.

(74) *Airmanship*—The consistent use of good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives.

(75) *Airship*—A power-driven lighter than air aircraft.

(76) *Airway*—A control area or portion thereof established in the form of a corridor.

(77) *Airworthiness Approval Tag* (*CAA Form*)—A tag (Model CAA Form AAT) that may be attached to a part. The tag must include the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, a new tag must be created or the existing tag must be updated with the current life status. The Model CAA Form AAT has two distinct purposes—

(1) as a certification of release to service of a part, component or assembly after maintenance, preventive maintenance, overhaul or rebuilding, and

(2) for shipping of a newly manufactured part.

(78) *Airworthiness Data*—Any information necessary to ensure that an aircraft or aircraft component can be maintained in a condition such that airworthiness of the aircraft, or serviceability of operational and emergency equipment, as appropriate, is assured.

(79) *Airworthiness Directive*—Continuing airworthiness information that applies to the following products : aircraft, aircraft engines, propellers, and appliances. An airworthiness directive is mandatory if issued by the State of Design.

(80) *Airworthiness Release*—The air operator's aircraft are released for service following maintenance by a person specifically authorised by the air operator rather than by an individual or maintenance organisation on their own behalf.

Note : *An airworthiness release is not the same as a maintenance release or a maintenance return to service as described in Parts 5 and 6. Regarding the airworthiness release, in effect, the person signing the release acts in the capacity of an authorised agent for the operator and is certifying that the maintenance covered by the release was accomplished according to the air operator's continuous maintenance programme. Normally, a release is required following inspections prescribed by the air operator's operations specifications and maintenance activities involving inspections, and any other significant maintenance. A copy of the airworthiness release must be given to the pilot in command before the aircraft commences operations. In addition, the air operator should designate when an airworthiness release is* *required. The air operator is obligated to designate, by name or occupational title, each licensed AME or maintenance organisation authorised to execute the airworthiness release. In addition, the air operator should designate when an airworthiness release is required.*

(81) Airworthy.—The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

(82) *ALERFA.*—The code word used to designate an alert phase.

(83) *Alteration.*—The alteration of an aircraft/aeronautical product in conformity with an approved standard.

(84) *Alerting Service.*—A service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required.

(85) *Alternate Aerodrome.*—An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or land at the aerodrome of intended landing. Alternate aerodromes include the following :

(*i*) *Takeoff Alternate* : An alternate aerodrome at which an aircraft can land should this become necessary shortly after takeoff and it is not possible to use the aerodrome of departure ;

(*ii*) *En-route Alternate* : An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition en route ;

(*iii*) *EDTO En-route Alternate* : A suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shut-down or other abnormal or emergency condition while en route in an EDTO operation ;

(*iv*) *Destination Alternate* : An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note : The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

(86) *Alternate means of Compliance.*—A pre-approved manner of achieving regulatory compliance that has been determined to be an acceptable substitute to the regulatory requirements.

Note : An example of alternate means of compliance would be the CAA's approval of reduced flight time from 40 hours to 35 hours for a PPL(A) when training is conducted in an Approved Training Organisation.

(87) *Alternative means of Compliance.*—An approved alternative from those prescribed approaches that has been demonstrated to consistently achieve or exceed the desired outcomes as intended through regulation.

(88) *Altimetry System Error* (*ASE*).—The difference between the altitude indicted by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

(89) *Altitude.*—The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

(90) *Ampere* (*A*).—The ampere is that constant electric current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross- section, and placed 1 metre apart in vacuum, would produce between these conductors a force equal to 2 x 1 Om-7 newton per metre of length.

(91) *Annexes to the Chicago Convention.*—The documents issued by the International Civil Aviation Organisation (ICAO) containing the Standards and Recommended Practices applicable to civil aviation.

(92) *Anticipated Operating Conditions.*—Those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of the aircraft, to the efficiency of personnel and to all the factors affecting safety in flight.

Anticipated operating conditions do not include :

(*a*) those extremes which can be effectively avoided by means of operating procedures ; and

(*b*) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.

(93) *Appliances.*—Instruments, equipment, apparatus, parts, appurtenances, or accessories, of whatever description, which are used, or are capable of being or intended to be used, in the navigation, operation, or control of aircraft in flight (including parachutes and including communication equipment and any other mechanism or mechanisms installed in or attached to aircraft during flight), and which are not part or parts of aircraft, aircraft engines, or propellers.

(94) *Approach Phase.*—The operating phase defined by the time during which the engine is operated in the approach operating mode.

(95) *Approach and Landing Operations using instrument approach procedures.*—Instrument approach and landing operations are classified as follows :

(*i*) *Non-precision approach and landing operations.* An instrument approach and landing which utilised lateral guidance but does not utilise vertical guidance.

(*ii*) *Approach and landing operations with vertical guidance.* An instrument approach and landing which uses lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

(*iii*) *Precision approach and landing operations.*An instrument approach and landing using precision lateral and vertical guidance with minima as determined by the category of operation.

Note : Lateral and vertical guidance refers to the guidance provided either by : a ground-b\based navigation aid : or

(*a*) computer generated navigation data.

(*iv*) Category I (CAT I) operation. A precision instrument approach and landing with :

(*a*) a decision height not lower than 60 m (200 feet ; and

(*b*) with either a visibility not less than 800 m or a runway visual range not less than 550 m.

(*v*) Category II (CAT II) operation. A precision instrument approach and landing with :

(*a*) a decision height lower than 60 m (200 feet), but not lower than 30 m (100 feet) ; and

(*b*) a runway visual range not less than 300 m.

(*vi*) Category IIIA (CAT IIIA) operation. A precision instrument approach and landing with :

(*a*) a decision height lower than 30 m (100 feet) or no decision height ; and

(*b*) a runway visual range not less than 175 m.

(*vii*) Category IIIB (CAT IIIB) operation. A precision instrument approach and landing with :

(*a*) a decision height lower than 15 m (50 feet) or no decision height ; and

(*b*) a runway visual range less than 175 m but not less than 50 m.

(*viii*) Category IIIC (CAT IIIC) operation. A precision instrument approach and landing with no decision height and no runway visual range limitations.

Note : Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach and landing operation would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation).

(96) *Approach Control Service.*—Air traffic control service for arriving or departing controlled flights.

(97) *Approach Control Unit.*—A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

(98) *Appropriate ATS or ATC Authority.*—The relevant authority designated by Nigeria responsible for providing air traffic services in the airspace concerned.

(99) *Appropriate Airworthiness Requirements.*—The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.

(100) *Appropriate Authority* :

(*i*) *Regarding flight over the high seas*: The relevant authority of the State of Registry.

(*ii*) *Regarding flight other than over the high seas* : The relevant authority of the State having sovereignty over the territory being overflown.

(101) *Approval for return to service*—See maintenance release.

(102) *Approved*—A rule of construction in Part 1.1.1.1 (*a*)(6) that means the Authority has reviewed the method, procedure, or policy in question and issued a formal written approval.

(103) *Approved by the Authority.*—Approved by the Authority directly or in accordance with a procedure approved by the Authority.

(104) *Approved continuous Maintenance Programme.*—A maintenance programme approved by the State of Registry.

(105) *Approved Curriculum.*—A set of special training courses in an area of specialization offered by an ATO which is approved by the Authority.

(106) *Approved Data.*—Technical information approved by the Authority.

(107) *Approved Maintenance Organisation* (*AMO*).—An organisation approved by the Authority, in accordance with Part 6, to perform specific aircraft maintenance activities by the Authority. These activities may include the inspection, overhaul, maintenance, repair and/or modification and release to service of aircraft or aeronautical products.

(108) *Approved Standard.*—A manufacturing, design, maintenance, or quality standard approved by the Authority.

(109) *Approved Training.*—Training carried out under special curricula and supervision approved by the Authority.

(110) *Approved Training Organisation* (*ATO*).—An organisation approved by the Authority, in accordance with MCAR Part 3, to perform flight crew training and other training approved by the Authority.

(111) *Apron*.—A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fueling, parking or maintenance.

(112) *Area Control Centre.*—A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

(113) *Area Control Service.*—Air traffic control service for controlled flights in control areas.

(114) *Area Navigation* (*RNAV*).—A method of navigation that permits aircraft operations on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note : Area navigation includes performance-based navigation as well as other operations that do not meet the definitions of performance-based navigation.

(115) *Article.*—Any item, including but not limited to, an aircraft, airframe, aircraft engine, propeller, appliance, accessory, assembly, subassembly, system, subsystem, component, unit, product, or part.

(116) *ATS or ATC Route*.—A specified route designed for channelling the flow of air traffic as necessary for the provision of air traffic services, defined by route specifications that include an ATS or ATC route designator, the track to or from significant points (way points), distance between significant points, reporting requirements, and as determined by the appropriate ATS or ATC authority, the lowest safe altitude.

Note : The term "ATS" or "ATC" route is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure route.

(117) *Authorised instructor.*—A person who—

(*i*) Holds a valid ground instructor certificate issued under Part 2 when conducting ground training ;

(*ii*) Holds a current flight instructor certificate issued under Part 2 when conducting ground training or flight training ; or

(*iii*) Is authorised by the Authority to provide ground training or flight training under Part 2 and Part 3.

(118) *Authority.*—Nigeria Civil Aviation Authority.

(119) *Automatic Dependent Surveillance-Contract* (*ADS-C*). A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

Note : The abbreviated term "ADS contract" is commonly used to refer to ADS event contract, ADS periodic contract or an emergency mode.

(120) *Automatic Terminal Information Service* (*ATIS*).—The automatic provision of current routine information to arriving and departing aircraft throughout 24 hours of a specified portion thereof.

(121) *Autonomous Aircraft.*—An unmanned aircraft that does not allow pilot intervention in the management of the flight.

(122) *Aviation Medical Examiner.*—A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed.

(123) *Base Turn.*—A turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal.

(124) *Becquerel* (*BQ*).—The activity of a radionuclide having one spontaneous nuclear transition per second.

(125) *Balloon.*—A non-power-driven lighter-than-air aircraft.

(126) *Banner.*—An advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.

(127) *Cabin Crew Member.*—A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall no t act as a flight crew member.

(128) *Calendar Day.*—The period of elapsed time, using Co-ordinated Universal Time or local time,that begins at midnight and ends 24 hours later in the next midnight.

(129) *Calendar Month.*—A period of a month beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered month (as January 1 through January 31 in the Gregorian calendar).

(130) *Calendar Year.*—A period of a year beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered year (as January 1 through December 31 in the Gregorian calendar).

(131) *Calibration.*—A set of operations, performed in accordance with a definite documented procedure that compares the measurement performed by a measurement device or working standard with a recognised bureau of standards for the purpose of detecting and reporting or eliminating adjustment errors in the measurement device, working standard, or aeronautical product tested.

(132) *Candela* (*CD*).—The luminous intensity, in the perpendicular direction, of a surface of 1/600 000 square metre of black body at the temperature of freezing platinum under a pressure of 101 325 newtons per square metre.

(133) *Cargo Aircraft.*—Any aircraft carrying goods or property but not passengers. In this context the following are not considered to be passengers :

(*i*) A crewmember.

(*ii*) An operator's employee permitted by, and carried in accordance with, the instructions contained in the Operations Manual.

(*iii*) An authorised representative of an Authority.

(*iv*) A person with duties in respect of a particular shipment on board.

(134) *Category A.*—With respect to helicopters, means a multi-engine helicopter designed with engine and system isolation features specified in Part IVB and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

(135) *Category B.*—With respect to helicopters, means a single-engine or multi-engine helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed.

(136) *Category One Operation* (*CAT I*).—A precision instrument approach and landing with a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m.

(137) *Category Two Operation* (*CAT II*).—A precision instrument approach and landing with a decision height lower than 60 m (200ft) but no lower than 30 m (100 ft) and a visual range not less 300 m.

(138) *Category three A* (*CAT IIIA*) *Operation.*—A precision approach and landing with: a decision height lower than 30 m (100ft) or no decision height ; and a runway visual range not less than 175 m.

(139) *Category three B* (*CAT IIIB*) *Operation.*—A precision approach and landing with : a decision height lower than 15 m (50 ft) or no decision height ; and a runway visual range less than 175 m but not less than 50 m.

(140) *Category three C* (*CAT IIIC) Operation.*—A precision instrument approach and landing with no decision height and no runway visual range limitations.

(141) *Causes.*—As relating to an aircraft accident or incident, actions, omissions, events, conditions, or a combination thereof which led to the accident or incident. (ICAO Annex 13).

(142) *Ceiling.*—The height above the ground or water of the base of the lowest layer of cloud below 6,000 metres (20,000 feet) covering more than half the sky.

(143) *Celsius temperature* (*T×C*).—The Celsius temperature is equal to the difference t×c = T - Tu between two thermodynamic temperatures T and To where To equals 273.15 kelvin.

(144) *Certificate of Airworthiness*.—A certificate, issued by the State of Registry, when the aircraft has been deemed fit and safe for flight and in conformity with the type design approved by the State of Design and maintained in accordance with the continuing airworthiness requirements of the State of Registry.

(145) *Certify as Airworthy.*—The act of completing a maintenance release by a properly authorised person after the modification, overhaul, repair or inspection of an aircraft or aeronautical product by which the aircraft or aeronautical part is cleared for use in flight as meeting the requirements of the airworthiness certificate of Nigeria,

(146) *Certifying Staff*.—Those personnel who are authorised by the Approved Maintenance Organisation in accordance with a procedure acceptable to the Authority to certify aircraft or aircraft components for release to service.

(147) *Change-over-point*.—The point at which an aircraft navigating on an ATC route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer its primary navigational references from the facility behind the aircraft to the next facility ahead of the aircraft.

Note : Change-over-points are established to provide the optimum balance in respect of signal strength and quality between facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.

(148) *Check airman* (*Aircraft*).—A person who is qualified, and approved by the Authority, to conduct a flight crew evaluation in an aircraft or in a flight simulation training device for a particular type aircraft, for a particular AOC holder.

(149) *Check Airman* (*Simulator*).—A person who is qualified, and approved by the Authority, to conduct a flight crew evaluation, but only in a flight simulation training device for a particular type aircraft, for a particular AOC holder.

(150) *Check Person.*—A qualified person who is authorised by the Authority to conduct an evaluation of either an AOC holders flight crew (pilots, flight engineers, or flight navigators), cabin crew, or flight operations officer. Terms that may be used to describe this person, depending upon responsibilities, are: check pilot, check flight engineer, check flight navigator, check cabin crewmember, and check flight operations officer. Check persons for flight crew may be further authorised to perform checks in either an aircraft or simulator as defined below :

(*i*) *Check person* (*Aircraft*).—A person who is qualified, and authorised by the Authority, to conduct a flight crew evaluation in an aircraft or in a flight simulation training device for a particular type aircraft, for a particular AOC holder.

(*ii*) *Check Person* (*Simulator*).— A person who is qualified, and authorised by the Authority, to conduct a flight crew evaluation, but only in a flight simulation training device for a particular type aircraft, for a particular AOC holder.

(151) *Chicago Convention*.—("Convention") The Convention on International Civil Aviation concluded in Chicago, U.S.A. in 1944, in effect, 1947. The Articles of the Chicago Convention govern the actions of the contracting States in matters of international civil aviation safety directly and through the Annexes to the Convention, which set forth ICAO Standards and Recommended Practices.

(152) *Citizen of Nigeria.*—This term refers to one of the following :

(*i*) An individual who is a citizen of Nigeria ;

(*ii*) A partnership of which each member is a citizen of Nigeria ; or

(*iii*) A corporation or association created or organised and authorised under the laws of Nigeria.

(153) *Civil Aircraft.*—Any aircraft other than a state or public aircraft.

(154) Civil Aviation.—The operation of any civil aircraft for the purpose of general aviation operations, aerial work or commercial air transport operations.

(155) *Climb Phase.*—The operating phase defined by the time during which the engine is operated in the climb operating mode.

(156) *Clearance Limit.*—The point to which an aircraft is granted an air traffic control clearance.

(157) *Cockpit Audio Recording System*—A device that uses a combination of microphones and other audio and digital inputs to collect and record the aural environment of the cockpit and communications to, from and between the pilots.

Source : EUROCAE ED-155 "Minimum Performance Specification for Lightweight Flight Recording Systems," July 2009, paragraph 1-1.5.1.

(158) *COMAT.*—Operator material carried on an operators aircraft for the operators own purpose.

(159) *Combined Vision System* (*CVS*). A System to display images from a combination of enhanced vision system (EVS) and a synthetic vision system (SVS).

(160) *Command and Control Link* (*C2*).—The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

(161) *Commercial Air Transport Operation.*—An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

(162) Commercial Air Transport.—An aircraft operation involving the public transport of passengers, cargo, or mail for remuneration or hire.

(163) *Common Mark.*—A mark assigned by the International Civil Aviation Organisation to the common mark registering authority registering aircraft of an international operating agency on other than a national basis.

(164) *Common Mark Registering Authority.*—The authority maintaining the non-national register or, where appropriate, the part thereof, in which aircraft of an international operating agency are registered.

(165) *Competency.*—A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

(166) *Competency Based Training and Assessment.*—Training and assessment that are characterised by a performance orientation, emphasis on standards of performance and their measurement, and the development of training to the specified performance standards.

Note : *This training process is derived from a job and task analysis and is focused on the achievement of well-defined, benchmarked standards of performance as opposed to training programmes simply focused upon the acquisition of prescribed levels of experience.*

(167) *Competency Element.*—An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

(168) *Competency Unit.*—A discrete function consisting of a number of competency elements.

(169) *Complex Aeroplane.*—An aeroplane that has retractable landing gear, flaps, and a controllable pitch propeller; or in the case of a seaplane, flaps and a controllable pitch propeller.

(170) *Composite.*—Structural materials made of substances, including, but not limited to, wood, metal, ceramic, plastic, fiber-reinforced materials, graphite, boron, or epoxy, with built-in strengthening agents that may be in the form of filaments, foils, powders, or flakes, of a different material.

(171) *Computer System.*—Any electronic or automated system capable of receiving, storing, and processing external data, and transmitting and presenting such data in a usable form for the accomplishment of a specific function.

(172) *Configuration*—(*as applied to the aeroplane*). A particular combination of the positions of the moveable elements, such as wing flaps and landing gear, etc., that affect the aerodynamic characteristics of the aeroplane.

(173) *Configuration Deviation List* (*CDL*).—A list established by the organisation responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

(174) *Continuous descent Final Approach (CDFA).*—A technique, consistent with stabilized approach procedures, for flying the final approach segment of a non-precision instrument approach procedures as a continuous descent, without level-off, from an altitude/height at or above the final approach

fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown.

(175) *Congested Area.*—A city town or settlement, or open air assembly of people.

(176) *Congested Hostile Environment.*—A hostile environment within a congested area.

(177) *Consignment.*—One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.

(178) *Contracting States.*—All States that are signatories to the Convention on International Civil Aviation (Chicago Convention).

(179) *Continuing airworthiness.*—The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

(180) *Control Area.*—A controlled airspace extending upwards from a specified limit above the earth.

(181) *Controlled Aerodrome.*—An aerodrome at which air traffic control service is provided to aerodrome traffic.

(182) *Controlled Airspace*— An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Note : Controlled airspace is a generic term that covers ATC or ATS airspace Classes A, B, C, D, and E as described in ICAO Annex 11 : 2.6.

(183) *Controlled Flight.*—Any flight which is subject to an air traffic control clearance.

(184) *Controlled Flight into Terrain.*—Occurs when an airworthy aircraft is flown, under the control of a qualified pilot, into terrain (water or obstacles) with inadequate awareness on the part of the pilot of the impending collision.

(185) *Controller-pilot Data Link Communications* (*CPDLC*).—A means of communication between controller and pilot, using data link for ATC communications.

(186) *Control Zone.*—A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

(187) *Conversion.*—Conversion is the action taken by the Authority in issuing its own licence on the basis of a licence issued by another Contracting State for use on aircraft registered in Nigeria

(188) *Co-pilot.*—A licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

Note : Co-pilot as here defined is synonymous with the term "second-in-command" or "SIC."

(189) *Corporate Aviation Operation.*—The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by (*a*) professional pilot(s) employed to fly the aircraft.

(190) *Coulomb* (*C*).—The quantity of electricity transported in 1 second by a current of 1 ampere.

(191) *Course*—A programme of instruction to teach knowledge, skills and/or competencies in a particular area or subject, or to maintain existing qualifications.

(192) Courseware.—Instructional material developed for each course or curriculum, including lesson plans and other aides such as: computer software programmes, audio-visual programmes, workbooks, and handouts.

(193) *Credit.*—Recognition of alternative means or prior qualifications.

(194) *Crew Member.*—A person assigned by an operator to duty on an aircraft during a flight duty period.

(195) *Crew Resource Management*—A programme designed to improve the safety of flight operations by optimising the safe, efficient, and effective use of human resources, hardware, and information through improved crew communication and co-ordination.

(196) *Critical engine*(*s*).—Any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under consideration.

Note.—On some aircraft there may be more than one equally critical engine. In this case, the expression "the critical engine" means one of those critical engines.

(197) *Critical phases of Flight.*—Those portions of operations involving taxiing, takeoff and landing, and all flight operations below 3050 m (10,000 feet), except cruise flight.

(198) *Critical Power-unit(s)*.—The power-unit(s) failure of which gives the most adverse effect on the aircraft characteristics relative to the case under consideration.

Note : On some aircraft there may be more than one equally critical power-unit. In this case, the expression "the critical power-unit" means one of those critical power-units.

(199) *Cross Country.*—A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

(200) *Cross-Country Time*.—That time a pilot spends in flight in an aircraft which includes a landing at a point other than the point of departure and, for the purpose of meeting the cross-country time requirements for a private pilot licence (except with a rotorcraft rating), commercial pilot licence, or an instrument rating, includes a landing at an aerodrome which must be a straight-line distance of more than 50 nautical miles from the original point of departure.

(201) *Cruise Climb.*—An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases.

(202) *Cruise Relief Pilot.*—A flight crew member who is assigned to perform pilot tasks during cruise flight to allow the PIC or co-pilot to obtain planned rest.

(203) *Cruising Level.*—A level maintained during a significant portion of a flight.

(204) *Curriculum.*—A set of courses in an area of specialization offered as part of a training programme. Check TRAINAIR Plus training manual

(205) *Current flight plan.*—The flight plan, including changes, if any, brought about by subsequent clearances.

(206) *Danger Area.*—An airspace of defined dimensions within which activities dangerous to the flight of the aircraft may exist at specified times.

(207) *Dangerous Goods.*—Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the ICAO Technical Instructions (see definition below) or which are classified according to those Instructions.

(208) *Dangerous Goods Accident.*—An occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property or environmental damage.

(209) *Dangerous Goods Incident*.—An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage,

leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants is deemed to constitute a dangerous goods incident.

(210) *Dangerous Goods Transport Document.*—A document specified by the ICAO Technical Instructions for the Safe Transportation of Dangerous Goods by Air. It is completed by the person who offers dangerous goods for air transport and contains information about those dangerous goods. The document bears a signed declaration indicating that the dangerous goods are fully and accurately described by their proper shipping names and UN numbers (if assigned) and that they are correctly classified, packed, marked, labelled and in a proper condition for transport.

Note : See definition below for Technical Instructions.

(211) *Data Link Communications.*—A form of communication intended for the exchange of messages via a data link.

(212) *Data Link Recording System.*—A device that records those messages whereby the flight path of the aircraft is authorised, controlled directly or indirectly, and which are relayed over a digital data-link rather than by voice communication. Source: EUROCAE ED-155 "Minimum Performance Specification for Lightweight Flight Recording Systems," July, 2009, paragraph 1-1.5.1.

(213) *Deadhead Transportation.*—Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crew member's home station.

(214) *Decision Altitude* (*DA*) *or Decision Height* (*DH*).—A specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1 : Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.

Note 2 : The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height that required visual reference is that specified for the particular procedure and operation.

Note 3 : For convenience where both expressions are used they may be written in the form "decision altitude/height" and abbreviated "DA/H".

(215) *Defined Point after Takeoff* (*DPATO*).—The point, within the takeoff and initial climb phase, before which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

(216) *Defined Point Before Landing* (*DPBL*).—The point, within the approach and landing phase, after which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

(217) *Degree Celsius* (^{o}C).—The special name for the unit kelvin for use in stating values of Celsius temperature.

(218) *Design Landing Mass*.—The maximum mass of the aircraft at which, for structural design purposes, it is assumed that it will be planned to land.

(219) *Design Take-off Mass*.—The maximum mass at which the aircraft, for structural design purposes, is assumed to be planned to be at the start of the take-off run.

(220) *Design Taxing Mass*.—The maximum mass of the aircraft at which structural provision is made for load liable to occur during use of the aircraft on the ground prior to the start of take-off.

(221) *Designated Examiner.*—Any person designated by the Authority to act as a representative of the Authority in examining, inspecting, and testing persons for the purposes of issuing licences, ratings, or certificates

(222) *Detect and Avoid*.—The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

(223) *DETRESFA*.—The code word used to designate a distress phase.

(224) *Directly-in-Charge*.—As applied to an Approved Maintenance Organisation in Part 6 - Means an appropriately licensed person(s) having the responsibility for the work of an approved maintenance organisation that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness. A person directly in charge does not need to physically observe and direct each worker constantly but must be available for consultation on matters requiring instruction or decision from higher authority.

(225) *Director-General*.—The Director General of Nigeria Civil Aviation Authority appointed under Section 8 of the Civil Aviation Act 2006.

(226) *Discrete Source Damage*.—Structural damage of the aeroplane that is likely to result from: impact with a bird, uncontained fan blade failure, uncontained engine failure, uncontained high-energy rotating machinery failure or similar causes.

(227) *Dry Lease.*—The lease of an aircraft without the crew.

(228) *Dual instruction time*—Flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft.

(229) *Duty.*—Any task that flight or cabin crew members are required by the operator to perform, including for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue.

(230) *Duty Period.*—As related to an air operator, a period which starts when flight or cabin crew personnel are required by an operator to report for or to commence a duty and ends when that person is free from all duties.

(231) *Duty Time.*—The total time from the moment a person identified in these regulations begins, immediately after a rest period, any work on behalf of the certificate holder until that person is free from all restraint associated with that work.

(232) *Economic Poison.*—Any substance or mixture of substances intended for—

(*i*) Preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living human beings or other animals, which Nigeria may declare to be a pest, and

(*ii*) Use as a plant regulator, defoliant or desiccant.

(233) *Effective length of the runway.*—The distance for landing from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centre line of the runway to the far end.

(234) *Electronic Flight Bag*.—An electronic information system comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties.

(235) *Elevated Heliport.*—A heliport located on a raised structure on land.

(236) *ELT battery useful life*.—The length of time after its date of manufacture or recharge that the battery or battery pack may be stored under normal environmental conditions without losing its ability to allow the ELT to meet the applicable performance standards.

(237) *ELT battery expiration date*.—The date of battery manufacture or recharge plus one half of its useful life.

(238) *Emergency Locator Transmitter* (*ELT*).—A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following :

(*i*) *Automatic fixed ELT* : An automatically activated ELT which is permanently attached to an aircraft.

(*ii*) *Automatic portable ELT*. An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

(*iii*) *Automatic deployable ELT (ELT(AD)).* An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and in some cases, also be hydro static sensors. Manual deployment is also provided.

(*iv*) *Survival ELT*. An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

(239) *Enhanced Vision System* (*EVS*).—A system to display electronic real-time images of the external scene achieved through the use of image sensors.

(240) *Engine.*—A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).

(241) *Enhanced Ground Proximity Warning* (*EGPWS*).—A forward looking warning system that uses the terrain data base for terrain avoidance.

(242) *Equivalent System of Maintenance*.—An AOC holder may conduct maintenance activities through an arrangement with an AMO or may conduct its own maintenance, preventive maintenance, or alterations, so long as the AOC holder's maintenance system is approved by the Authority and is equivalent to that of an AMO, except that the approval for return to service of an aircraft/aeronautical product shall be made by an appropriately licensed aviation maintenance technician or aviation repair specialists in accordance with Part 2, as appropriate.

(243) *Error.*—As relates to the flight crew, an action or inaction by the flight crew that leads to deviations from organisational or flight crew intentions or expectations.

(244) *Error Management.*—The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors, and mitigate the probability of errors or undesired aircraft state.

(245) *Estimated off-block Time*.—The estimated time at which the aircraft will commence movement associated with departure.

(246) *Estimated Time of Arrival.*—For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that approach procedure will be commenced, or if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

(247) *Evaluator.*—A person employed by a certified Approved Training Organisation who performs tests for licensing, added ratings, authorisations, and proficiency checks that are authorised by the certificate holder's training specification, and who is authorised by the Authority to administer such checks and tests.

(248) *Extended Diversion Time Operations* (*EDTO*).—Any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the State of the Operator.

(249) *Extended diversion time operations critical fuel.*—The fuel quantity necessary to fly to an en-route alternate aerodrome considering at the most critical point on the route, the most limiting system failure.

(250) *Extended diversion time operations significant system.*—An aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an extended diversion time operations diversion.

(251) *Extended Flight Over Water.*—A flight operated over water at a distance of more than 93km (50 NM), or 30 minutes at normal cruising speed, whichever is the lesser, away from land suitable for making an emergency landing.

(252) *Examiner.*—Any person designated by the Authority to act as a representative of the Authority in examining , inspecting, and testing persons and aircraft for the purpose of issuing licences, ratings and certificates.

(253) *Exception.*—As it related to dangerous goods in Part 9 - A provision in ICAO Annex 18 which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

(254) *Expected Approach Time.*—The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding point to complete its approach for a landing.

Note : The actual time of leaving the holding point will depend upon the approach clearance.

(255) *Extended Overwater Operation.*—With respect to aircraft other than helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline; and to helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline and more than 50 nm from an offshore heliport structure.

(256) *Facility.*—A physical plant, including land, buildings, and equipment, which provides a means for the conduct of the activities approved by the Authority for an approved or certificated entity.

(257) *Factor of Safety.*—A design factor used to provide for the possibility of loads greater than those assumed, and for uncertainties in design and fabrication.

(258) *Farad* (*F*).—The capacitance of a capacitor between the plates of which there appears a difference of potential of 1 volt when it is charged by a quantity of electricity equal to 1 coulomb.

(259) *Fatal Injury.*—As relates to an aircraft accident, any injury which results in death within 30 days of the accident.

(260) *Fatigue.*—A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, Circadian phase, or workload (mental and/or physical activity) that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety related duties.

(261) *Fatigue Risk Management System* (*FRMS*).—A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

(262) *Filed Flight Plan.*—The flight plan as filed with an air traffic service unit by the pilot or designated representative, without any subsequent changes.

(263) *Final Approach.*—That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified, at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or at the point of interception of the last track specified in the approach procedure; and ends at a point in the vicinity of an aerodrome from which :

(*i*) a landing can be made ; or
(*ii*) a missed approach procedure is initiated.

(264) *Final Approach and Take-off Area* (*FATO*).—A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by performance Call 1 helicopters, the defined area includes the rejected take-off area available.

(265) *Final Approach Segment* (*FAS*).—The segment of an instrument approach procedures in which alignment and descent for landing are accomplished.

(266) *Finding.*—A conclusion by audit personnel that demonstrates non-conformity with a specific standard.

(267) *Fire Resistant.*—The capability to withstand the application of heat by a flame for a period of 5 minutes.

Note : The characteristics of an acceptable flame can be found in ISO 2685.

(268) *Fireproof.*—The capability to withstand the application of heat by a flame for a period of 15 minutes.

Note : The characteristics of an acceptable flame can be found in ISO 2685.

(269) *Fireproof Material.*—A material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose.

(270) *Flight*(*s*).—The period from takeoff to landing.

(271) *Flight Crew Member.*—A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

(272) *Flight Data Analysis.*—A process of analysing recorded flight data in order to improve the safety of flight operations. \

(273) *Flight Duty Period.*—A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aeroplane finally comes to rest and the engines are shut down at the end of the last flight on which he/she is a crew member.

(274) *Flight Information Centre.*—A unit established to provide flight information service and alerting service.

(275) *Flight Information Region.*—An airspace of defined dimensions within which flight information service and alerting service are provided.

(276) *Flight Information Service.*—A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

(277) *Flight Level.*—A surface of constant atmospheric pressure which is related to a specific pressure datum, 1,013.2 hectopascals (hPa), and is separated from other surfaces by specific pressure intervals.

(278) *Flight manual.*—A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions information necessary to the flight crew members for the safe operation of the aircraft.

(279) *Flight Operations Officer/Flight Dispatcher.*—A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

(280) *Flight Plan.*—Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

(281) *Flight Recorder.*—Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation. Note: This could include the cockpit voice recorder (CVR) or flight data recorder (FDR).

(282) *Flight Release.*—A flight preparation identifying the type of operation with the permitting weight limitations, fuel requirement, weather conditions at departure, en-route destination and alternate airports for safe operation.

(283) *Flight safety document system.*—A set of inter-related documentation established by the operator, compiling and organising information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

(284) *Flight Simulation Training Device.*—Any one of the following three types of apparatus in which flight conditions are simulated on the ground :

(*i*) A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated ;

(*ii*) A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical ,electronic, etc., aircraft systems, and the performance and flight characteristics of aircraft of a particular class.

(*iii*) A basic instrument flight trainer, which is equipped with appropriate instruments and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

(285) *Flight Status.*—An indication of whether a given aircraft requires special handling by air traffic services units or not.

(286) *Flight Time.*—The period of time that the aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after it is parked, with engine(s) shut down if applicable.

Note : Flight time as here defined is synonymous with the term "block-to-block" time or "chock-to-chock" time in general usage, which is measured from the time an aircraft moves from the loading point until it stops at the unloading point.

(287) *Flight Time—Aeroplane.*—The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

(288) *Flight Time—Helicopter.*—The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

(289) *Flight Time—Glider.*—The total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it come to rest at the end of the flight.

(290) *Flight Training.*—Training, other than ground training, received from an authorised instructor in flight in an aircraft.

(291) *Flight Visibility.*—The visibility forward from the cockpit of an aircraft in flight.

(292) *Foot* (*ft*).—The length equal to 0.304 8 metre exactly.

(293) *Forecast.*—A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

(294) *Foreign Air Operator.*—Any operator, not being a Nigerian air operator, which undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in commercial air transport operations within borders or airspace of Nigeria, whether on a scheduled or charter basis.

(295) *Foreign Authority.*—The civil aviation authority that issues and oversees the Air Operator Certificate of the foreign operator.

(296) *Frangible Object.*—An object of low mass designed to break, distort, or yield on impact so as to present the minimum hazard to aircraft.

(297) *Freight Container.*—See unit load device.

(298) *Freight container in the case of radioactive material transport.*—An article of transport equipment designed to facilitate the transport of packaged goods, by one or more modes of transport without intermediate reloading. It must be of a permanent enclosed character, rigid and strong enough for repeated use, and must be fitted with devices facilitating its handling, particularly in transfer between aircraft and from one mode of transport to another. A small freight container is that which has either an overall outer dimension less than 1.5 m, or an internal volume of not more than $3m^3$. Any other freight container is considered to be a large freight container.

(299) *General aviation operation.*—An aircraft operation other than a commercial air transport operation or aerial work operation.

(300) *Glider.*—A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain, fixed under given conditions of flight.

(301) *Global Navigation Satellite System.*—means a worldwide position and time determination system, which includes one or more satellite constellations, aircraft receivers and system integrity monitoring, augmented as necessary to support the required navigation performance for the actual phase of operation.

(302) *Gray* (*Gy*).—The energy imparted by ionizing radiation to a mass of matter corresponding to 1 joule per kilogram.

(303) *Ground Handling.*—Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services.

(304) *Ground Proximity Warning System* (*GPWS*).—A warning system that uses radar altimeters to alert the pilots of hazardous flight conditions.

(305) *Ground Visibility.*—The visibility at an aerodrome, as reported by an accredited observer.

(306) *Gyroplane.*—A heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors which rotate freely on substantially vertical axes.

(307) *Handling Agent.*—An agency which performs on behalf of the operator some or all of the latter's functions including receiving, loading, unloading, transferring or other processing of passengers or cargo.

(308) *Hazard.*—A condition or an object with the potential to cause injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.

(309) *Heading.*—The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid.

(310) *Head-up Display* (*HUD*).—A display system that presents flight information into the pilot's forward external field of view.

(311) *Heavier-than-air Aircraft.*—Any aircraft deriving its lift in flight chiefly from aerodynamic forces.

(312) *Height.*—The vertical distance of a level, a point or an object considered a point, measured from a specified datum.

(313) *Helicopter.*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axis.

(*i*) *Categories* :

(*A*) *Category A.*—A multi-engined helicopter designed with engine and system isolation features specified in ICAO Annex 8, Part IVB, and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designed surface area and adequate performance capability for continued safe flight or safe rejected take-off.

(*B*) *Category B.*—A single engine or multi-engined helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event an engine failure, and a forced landing is assumed.

(*ii*) *Performance Classes* :

(*a*) *Class 1 Helicopter.*—A helicopter with performance such that, in case of critical engine failure, it is able to land within the rejected takeoff area or safely continue the flight to an appropriate landing area, depending on when the failure occurs.

(*b*) *Class 2 Helicopter.*—A helicopter with performance such that, in case of critical engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after takeoff or after a defined point before landing, in which case a forced landing may be required.

(*c*) *Class 3 Helicopter.*—A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.

Note 1: *See also definitions for operations in performance Class* 1, *Class* 2 *and Class* 3, *below.*

(314) *Helicopter Load Combinations.*—Configurations for external loads carried by helicopter—

(*i*) *Class A*—External load fixed to the helicopter, cannot be jettisoned, and does not extend below the landing gear, used to transport cargo.

(*ii*) *Class B*—External load suspended from the helicopter, which can be jettisoned, and is transported free of land or water during rotorcraft operations.

(*iii*) *Class C*—External load suspended from the helicopter, which can be jettisoned, but remains in contact with land or water during rotorcraft operation.

(*iv*) *Class D*—External load suspended from the helicopter for the carriage of persons.

(315) *Henry* (*H*).—The inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current in the circuit varies uniformly at a rate of 1 ampere per second.

(316) *Hertz* (*Hz*).—The frequency of a periodic phenomenon of which the period is 1 second.

(317) *Helideck.*—A heliport located on a floating or fixed offshore structure.

(318) *Heliport.*—An aerodrome or defined area on a structure intended to be used wholly or in part for the arrival, departure, and surface movement of helicopters.

(319) *Heliport Operating Minima.*—The limits of usability of a heliport for :

(*i*) Take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions ;

(*ii*) Landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and Landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) appropriate to the type and/or category of the operation.

(320) *High-Performance Aeroplane.*— An aeroplane with an engine of more than 200 horsepower.

(321) *High speed Aural Warning.*—A speed warning that is required for turbine-engined airplanes and airplanes with a Vmo/Mmo greater than 0.80 Vdf/Mdf or Vd/Md.

(322) *Holdover Time.*—The estimated time de-icing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft. Holdover time begins when the final application of de-icing or anti-icing fluid commences and expires when the de-icing or anti-icing fluid applied to the aircraft loses its effectiveness.

(323) *Housing.*—As it related to Approved Maintenance Organisations in Part 6 - Buildings, hangers, and other structures to accommodate the necessary equipment and materials of a maintenance organisation that—

(*i*) Provide working space for the performance of maintenance, preventive maintenance, or modifications for which the maintenance organisation is approved and rated ; and

(*ii*) Provide structures for the proper protection of aircraft, airframes, aircraft engines, propellers, appliances, components, parts, and subassemblies thereof during disassembly, cleaning, inspection, repair, modification, assembly, and testing ; and

(*iii*) Provide for the proper storage, segregation, and protection of materials, parts, and supplies.

(324) *Human factors Principles.*—Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

(325) *Human Performance.*—Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

(326) *ICAO.*—International Civil Aviation Organisation.

(327) *IFR.*—The symbol used to designate the instrument flight rules.

(328) *IFR Flight.*—A flight conducted in accordance with the instrument flight rules.

(329) *IMC.*—The symbol used to designate instrument meteorological conditions.

(330) *INCERFA.*—The code word used to designate an uncertainty phase.

(331) *Incident.*—An occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

(332) *Includes.*—A rule of construction in Part 1.1.1.1(*a*)(5) that means "includes but is not limited to."

(333) *Incompatible.*—Describing dangerous goods, which if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.

(334) *Industry Codes of Practice.*—Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organisation's Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate.

Note : Some States accept and reference industry codes of practice in the development of regulation to meet the requirements of Annex 19, Part II, and make available, for the industry codes of practice, their sources and how they may be obtained.

(335) *Inspectio0n.*—The examination of an aircraft or aeronautical product to establish conformity with a standard approved by the Authority.

(336) *Instructions for continued Airworthiness.*—A set of descriptive data, maintenance planning and accomplishment instructions, developed by a design approval holder in accordance with the certification basis for the product, providing operators with the necessary information for development of their own maintenance programme and accomplishment instructions.

(337) Instrument approach categories—

(*i*) *Category One* (*CAT I*) *Operation.*—A precision instrument approach and landing with a decision height not lower than 60m (200 ft) and with either a visibility not less than 800m or a runway visual range not less than 550m.

(*ii*) *Category Two* (*CAT II*) *Operation.*—A precision instrument approach and landing with a decision height lower than 60m (200ft) but no lower than 30m (100ft) and a visual range not less 300m.

(*iii*) *Category Three A* (*CAT IIIA*) *Operation.*—A precision approach and landing with : a decision height lower than 30m (100ft) or no decision height ; and a runway visual range not less than 175m.

(*iv*) *Category Three B* (*CAT IIIB*) *Operation.*—A precision approach and landing with : a decision height lower than 15m (50ft) or no decision height ; and a runway visual range less than 175m but not less than 50m.

(*v*) *Category Three C* (*CAT IIIC*) *Operation.*—A precision instrument approach and landing with no decision height and no runway visual range limitations.

Note : Definitions taken from text in ICAO Annex 6, Part 1: 4.2.8.3 and ICAO Annex 6, Part III, Section II: 2.2.8.

(338) *Instrument Approach Procedure. Instrument Approach Procedure* (*IAP*).—A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows :

(*i*) *Non-Precision Approach* (NPA) *procedure*.—An instrument approach procedures designed for 2D instrument approach operations Type A.

Note : Non-precision approach procedures may be flown using a continuous descent final approach technique(CDFA). CDFA with advisory VNAV guidance calculated by on-board equipment (see ICAO Doc 8168, Vol. I, Part I, Section 4, Chapter 1, paragraph 1.8.1) are considered 3D instrument approach operations. CDFA with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information, see ICAO Doc, 8168, PANS-OPS, Vol. I, Section 1.7 and 1.8.

(*ii*) Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type B.

(*iii*) *Precision Approach* (*PA*) *Procedure*—An instrument approach procedure based on navigation systems (LKS, MLS, GLS and SBAS CAT I) designed for 3D instrument approach operations Type A or B.

(339) *Instrument Approach Operations*.—An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations :

(*i*) A two-dimensional (2D) instrument approach operation, using lateral navigation guidance only ; and

(*ii*) A three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

Note : Lateral and vertical navigation guidance refers to the guidance provided either by :

(*a*) a ground-based radio navigation aid ; or

(*b*) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

(340) *Instrument Flight Time*.—Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

(341) *Instrument Ground Time*.—Time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the Authority.

(342) *Instrument Meteorological Conditions* (*IMC*).—Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

(343) *Instrument Time*—Time in which cockpit instruments are used as the sole means for navigation and control, which may be instrument flight time or instrument ground time.

(344) *Instrument Training*—Training which is received from an authorised instructor under actual or simulated instrument meteorological conditions.

(345) *Integrated Survival Suit*—A survival suit which meets the combined requirement of the survival suit and life jacket.

(346) *Interchange Agreement*—A leasing agreement which permits an air carrier to dry lease and take or relinquish operational control of an aircraft at an airport.

(347) *International Commercial Air Transport*—The carriage by aircraft of persons or property for remuneration or hire or the carriage of mail between any two or more countries.

(348) *International Operating Agency.*—An agency of the kind contemplated in Article 77 of the Convention on International Civil Aviation.

(349) *Investigation.*—As relates to an aircraft accident or incident, a process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.

(350) *Investigator-in-Charge.*—As relates to an aircraft accident or indent, a person charged, on the basis of his or her qualifications, with the responsibility for the organisation, conduct and control of an investigation.

(351) *Isolated Aerodrome.*—A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

(352) *Joule* (*J*).—The work done when the point of application of a force of 1 newton is displaced a distance of 1 metre in the direction of the force.

(353) *Journey Log.*—A form signed by the PIC of each flight that records the aeroplane's registration, crew member names and duty assignments, the type of flight, and the date, place, and time of arrival and departure.

(354) *Kelvin* (*K*).—A unit of thermodynamic temperature which is the fraction l/273.16 of the thermodynamic temperature of the triple point of water.

(355) *Kilogram* (*kg*).—The unit of mass equal to the mass of the international prototype of the kilogram.

(356) *Knot* (*kt*).—The speed equal to 1 nautical mile per hour.

(357) *Knowledge Test.*—A test on the aeronautical knowledge areas required for an airman licence or rating that can be administered in written form or by a computer.

(358) *Landing Area.*—That part of a movement area intended for the landing or takeoff of an aircraft.

(359) *Land Distance Available* (LDA).—The lengthy of runway which is declared available and suitable for the ground run of an aeroplane landing.

(360) *Landing Decision Point.*—The point used in determining landing performance from which, an engine failure occurring at this point, the landing may be safely continued or a balked landing initiated.

(361) *Landing Surface.*—That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft landing in a particular direction.

(362) *Large Aeroplane.*—An aeroplane having a maximum certified takeoff mass of 5,700 kg. (12,500 lbs.), or more.

(363) *Level.*—A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

(364) *Licensing Authority.*—The authority designated by the Contracting State as responsible for the licensing of personnel.

Note 1: Licensing Authority or Authority can be replaced by the term appropriate to the country adopting these regulations e.g. Minister, Civil Aviation Authority (CAA) or Director, as applicable.

Note 2 : The Licensing Authority is deemed to have been given the following responsibilities by the Contracting State :

(*i*) Assessment of an applicant's qualifications to hold a licence or rating ;

(*ii*) Issue and endorsement of licences and ratings ;

(*iii*) Designation and authorisation of approved persons ;

(*iv*) Approval of training courses ;

(*v*) Approval of the use of flight simulation training devices and authorisation for their use in gaining the experience or in demonstrating the skill required for the issue of a licence or rating ; and

(*vi*) Validation of licences issued by other Contracting States.

(365) *Life-limited part.*—Any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.

(366) *Lighter-than-air Aircraft.*—Any aircraft supported chiefly by its buoyancy in the air.

(367) *Lighting System Reliability.*—The probability that the complete lighting installation operates within the specified tolerances and that the system is operationally usable.

(368) *Likely.*—In the context of the medical provisions in for licensing in Part 2.11 likely means with a probably of occurring that is unacceptable to the medical assessor.

(369) *Limit Loads.*—The maximum loads assumed to occur in the anticipated operating conditions.

(370) Line check. A check given to a pilot by a check pilot to evaluate the pilot's operational competency during line operating flight time in an aircraft type he/she is qualified to fly, over a route and area in which the AOC is authorised to operate.

(371) *Line Maintenance.*—Any unscheduled maintenance resulting from unforeseen events, or scheduled checks that contain servicing and/or inspections that do not require specialised training, equipment or facilities.

(372) *Line Operating Flight Time.*—Flight time recorded by the PIC or Co-Pilot while in revenue service for an AOC holder.

(373) *Line Oriented Flight Training* (*LOFT*).—Training in a simulator with a complete crew using representative flight segments which contain normal, abnormal and emergency procedures that may be expected in line operations.

(374) *Line-Oriented Simulation*.—Simulation conducted using operational-oriented flight scenarios that accurately replicate interaction among flight crew members and between flight crew members and dispatch facilities, other crewmembers, air traffic control and ground operations.

(375) *Litre* (*L*).—A unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimetre.

(376) *Load Factor.*—The ratio of a specified load to the weight of the aircraft, the former being expressed in terms of aerodynamic forces, inertial forces or ground reactions.

(377) *Long range overwater flights*.—Routes on which an aeroplane may be over water and at more than a distance corresponding to 120 minutes at cruising speed or 740 km (400 NM), whichever is the lesser, away from land suitable for making an emergency landing.

(378) *Low altitude wind shear warning and guidance system*.—A system that will issue a warning of low altitude wind shear and in some cases provide the pilot with guidance information of the escaper manoeuvre.

(379) *Lumen* (*Lm*).—The luminous flux emitted in a solid angle of 1 steradian by a point source having a uniform intensity of 1 candela.

(380) *Lux* (*Lr*).—The illuminance produced by a luminous flux of 1 lumen uniformly distributed over a surface of 1 square metre.

(381) *Mach Number Indicator.*—An indicator that shows airspeed as a function of the Mach number.

(382) *Maintenance.*—The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

(383) *Maintenance Control Manual.*—A document that describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

(384) *Maintenance Organisation's Procedures Manual.*—A document endorsed by the head of the maintenance organisation which details the maintenance organisation's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

(385) *Maintenance Programme*.—A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

(386) *Maintenance Release.*—A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organisation's procedures manual or under an equivalent system.

(387) *Major Alteration.*—Major alteration means an alteration not listed in the aircraft, aircraft engine, or propeller specifications – (1) that might appreciably affect weight, balance, structural strength, performance, powerplant, operations, flight characteristics, or other qualities affecting airworthiness ; or (2) that cannot be done by elementary operations.

(388) *Major Modification.*—In respect of an aeronautical product for which a Type certificate has been issued, a change in the Type Design that has an appreciable effect, or other than a negligible effect, on the mass and balance limits, structural strength, powerplant operation, flight characteristics, reliability, operational characteristics, or other characteristics or qualities affecting the airworthiness or environmental characteristics of an aeronautical product.

(389) *Major Repair.*—Major repair means a repair : (1) that if improperly done might appreciably affect weight, balance, structural strength, performance, powerplant, operations, flight characteristics, or other qualities affecting airworthiness ; or (2) that is not done according to accepted practices or cannot be done by elementary operations.

(390) *Manoeuvring Area.*—That part of an aerodrome to be used for the takeoff, landing and taxiing of aircraft, excluding aprons.

(391) *Marker.*—An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

(392) *Marking.*—A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

(393) *Master Minimum Equipment List* (*MMEL*).—A list established for a particular aircraft type by the organisation responsible for the type design with the approval of the State of Design containing items, , one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures. The MMEL provides the basis for development, review, and approval by the Authority of an individual operator's MEL.

(394) *Materially altered Aircraft.*—Aircraft having powerplants installed other than those for which it is certified; or alterations to the aircraft or its components that materially affect flight characteristics.

(395) *Maximum Diversion Time.*—Maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome.

(396) *Maximum Mass.*—Maximum certificated take-off-mass.

(397) *May.*—A rule of construction in Part 1.1.1.1(*a*)(3) that indicates that discretion can be used when performing an act described in a regulation.

(398) *Medical Assessment.*—The evidence issued by the Authority that the licence holder meets specific requirements of medical fitness.

(399) *Medical Assessor.*—A physician, appointed by the Licensing Authority, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

(400) *Medical Certificate.*—A document issued by the Authority as acceptable evidence of physical fitness as required for certain personnel licence holders.

(401) *Medical Examiner.*—A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed. Called Aviation Medical examiners (AME) in this Part when non-CAA physicians are designated to perform medical examinations.

(402) *Meteorological Information.*—Meteorological reports, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

(403) *Meteorological Office*.—An office designated to provide meteorological service for international air navigation.

(404) *Metre* (*m*).—The distance travelled by light in a vacuum during II299 792 458 of a second.

(405) Minimum descent altitude (MDA) or minimum descent height (MDH). A specified altitude or height in a 2D approach operation or circling approach operation below which descent must not be made without the required visual reference.

Note 1: Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2 : The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3 : For convenience when both expressions are used they may be written in the form “minimum descent altitude/height” and abbreviated “MDA/H”.

(406) *Minimum Equipment List* (*MEL*).—A list approved by the Authority which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the Master Minimum Equipment List established for the aircraft type.

(407) *Minor.*—A minor repair means a repair other than a major repair.

(408) *Minor Modification.*—A modification other than a major modification.

(409) *Minister.*—This term means the Minister responsible for civil aviation.

(410) *Modification.*—The alteration of an aircraft/aeronautical product in conformity with an approved standard.

(411) *Mole* (*mol*).—The amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon-12.

(412) *Movement Area.*—That part of an aerodrome to be used for takeoff, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

(413) *Navigable Airspace.*—The airspace above the minimum altitudes of flight prescribed in these Model regulations (Part 8) and includes airspace needed to insure safety in the takeoff and landing of aircraft.

(414) *Navigational Aids in Nigeria.*—Sytems/Facilities (ground or space based) which have the capability of radiating and receiving radio frequency waves or signals in the airspace for aircraft in flight to utilise for monitoring flight progress, approach and landing

(415) *Nautical Mile* (*NM*).—The length equal to 1 852 metres exactly.

(416) *Navigation of Aircraft.*—A function which includes the piloting of aircraft.

(417) *Navigation Specification.*—A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications :

(*i*) *Required navigation performance* (*RNP*) *specification.*—A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH ;

(*ii*) *Area navigational* (*RNAV*) *specification.*—A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, *e.g.* RNAV 5, RNAV 1 ;

Note 1: The Performance-based Navigation (PBN) Manual (Doc 9613), Volume II, contains detailed guidance on navigation specifications.

Note : 2—The term RNP, previously defined as "a statement of the navigation performance necessary for operation within a defined airspace", has been removed from this *Annex* as the concept of RN P has been overtaken by the concept of PBM. The term RNP in this *Annex* is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc 9613.

(418) *Newton* (*N*).—The force which when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 metre per second squared.

(419) *Night.*—The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise. Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

(420) *Obstacle.*—All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extended above a defined surface intended to protect aircraft in flight.

(421) *Obstacle clearance altitude (OCA) or obstacle clearance height* (*OCH*).—The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, using in establishing compliance with appropriate obstacle clearance criteria.

Note 1: Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approach procedures to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach procedure is referenced to the aerodrome elevation.

Note 2 : For convenience when both expressions are used they may be written in the form "obstacle clearance altitude/height" and abbreviated "OCA/H."

(422) *Obstruction Clearance Plane.*—A plane sloping upward from the runway at a slope of 1:20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plane view, the centreline of the specified area coincides with the centreline of the runway, beginning at the point where the obstruction clearance plane intersects the centreline of the runway and proceeding to a point at least 450 m (1,500) feet from the beginning point.

Thereafter, the centreline coincides with the takeoff path over the ground for the runway (in the case of takeoffs) or with the instrument approach counterpart (for landings), or where the applicable one of these paths has not been established, it proceeds consistent with turns of at least 1.2 km (4,000 foot) radius until a point is reached beyond which the obstruction clearance plane clears all obstructions. This area extends laterally 60 m (200 feet) on each side of the centreline at the point where the obstruction clearance plane intersects the runway and continues at this width to the end of the runway; then it increases uniformly to150 m (500 feet) on each side of the centreline at a point 450 m (1,500 feet) from the intersection of the obstruction clearance plane with the runway; thereafter, it extends laterally 150 m (500 feet) on each side of the centreline.

(423) *Obstacle Free Zone* (*OFZ*).—The airspace above the inner approach surface, inner transitional surfaces and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

(424) *Obstacle Limitation Surfaces.*—Series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacle in order to permit the intended aircraft operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome.

(425) *Ohm* (Ω).—The electric resistance between two points of a conductor when a constant difference of potential of 1 volt, applied between these two points, produces in this conductor a current of 1 ampere, this conductor not being the source of any electromotive force.

(426) *Operating Position.*—An air traffic control function performed within or directly.

(427) *Operating Base*.—The location from which operational control is exercised.

Note : An operating base is normally the location where personnel involved in the operation of the aeroplane work and the records associated with the operation are located. An operating base has a degree of permanency beyond that of a regular point of call.

(428) *Operational Control.*—The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

(429) *Operational Flight Plan*.—The operator's plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations, and relevant expected conditions on the route to be followed and at the aerodromes or heliports concerned.

(430) *Operational Personnel.*—Personnel involved in aviation activities who are in a position to report safety information.

Note :—Such personnel include, but are not limited to flight crews ; air traffic controllers ; aeronautical station operators ; maintenance technicians ; personnel of aircraft design and manufacturing organizations ; cabin crews ; flight dispatchers, apron personnel and ground handling personnel.

(431) *Operations Manual*.—A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

(432) *Operations in performance Class* 1.—Helicopter operations in performance such that, in the event of critical engine failure, performance is available to enable the helicopter to safety continue the flight to an appropriate landing area, unless the failure occurs prior to reaching the take-off decision point (TDP) or after passing the landing decision point (LDP), in which cases the helicopter must be able to land within the rejected take-off or landing area.

(433) *Operations in Performance Class* 2.—Helicopter operations in performance such that, in the event of critical engine failure, performance is available to enable the helicopter to safety continue the flight to an appropriate landing area, except when the failure occurs early during the take-off manoeuver or late in the landing manoeuver, in which case a forced landing may be required.

(434) *Operations in performance Class* 3.—Helicopter operations in performance such that, in the event of an engine failure at any time during the flight, a forced landing will be required.

(435) *Operations Specifications*.—The authorisations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

Note : The operations specifications are part of an operator's certificate (air operator certificate, approved training organisation certificate, approved maintenance organisation certificate, etc.) that is used to administer safety standards and define the provisions and limitations within which the operator may conduct business operations. Operations specifications are issued by the Authority and considered a legal, contractual agreement between the Authority and the operator.

(436) *Operator.*—A person, organisation or enterprise engaged in or offering to engage in an aircraft operation (ICAO). Any person who causes or authorises the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

Note : In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.

(437) *Operator's Maintenance Control Manual.*—A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

(438) *Ornithopter.*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on planes to which a flapping motion is imparted.

(439) *Overhaul.*—The restoration of an aircraft/aeronautical product using methods, techniques, and practices acceptable to the Authority, including disassembly, cleaning, and inspection as permitted, repair as necessary, and reassembly ; and tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the State of Design, holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under Parts Manufacturing Authorisation (PMA) or Technical Standard Order (TSO).

(440) *Overpack.*—An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

(441) *Package*.—The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

(442) *Packaging.*—Receptacles and any other components or materials necessary for the receptacle to perform its containment.

(443) *Pascal* (*Pa*).—The pressure or stress of 1 newton per square meter.

(444) *Passenger Aircraft.*—An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.

(445) *Passenger Exit Seats*.—Those seats having direct access to an exit, and those seats in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit. A passenger seat having “direct access” means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.

(446) *Performance-based Navigation* (*PBN*).—Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note : Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

(447) *Performance Class* 1 *Helicopter*.—A helicopter with performance such that, in case of engine failure it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area.

(448) *Performance Class* 2 *Helicopter*.—A helicopter with performance such that, in case of engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which case a forced landing may be required.

(449) *Performance Class* 3 *Helicopter*.—A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.

(450) *Performance Criteria*.—A simple, evaluative statement on the required outcome of the competency element and a description of the criteria used to judge if the required level of performance has been achieved.

(451) *Person*.—Any individual, firm, partnership, corporation, company, association, joint stock association, or body politic, and includes any trustee, receiver, assignee, or other similar representative of these entities. (Law)

(452) *Pilot in Command*.—The pilot responsible for the operation and safety of the aircraft during flight time. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of the flight.

(453) *Pilot-in-Command* (*PIC*) *under Supervision*.—Co-pilot performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Licensing Authority.

(454) *Pilot Time*—That time a person—

(*i*) Serves as a required pilot ;

(*ii*) Receives training from an authorised instructor in an aircraft, or an approved flight simulation training device ; or

(*iii*) Gives training as an authorised instructor in an aircraft, or an approved flight simulation training device.

(455) *Pilot* (*to*).—To manipulate the flight controls of an aircraft during flight time.

(456) *Point of No Return*.—The last possible geographic point at which an aeroplane can proceed to the destination aerodrome as well as to an available en route alternate aerodrome for a given flight.

(457) *Policy.*—A document containing a position or stance regarding a specific issue.

(458) *Powered-lift*.—A heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight that depends principally on engine-driven lift devices or engine thrust for lift during these flight regimes and on nonrotating airfoil(s) for lift during horizontal flight.

(459) *Powerplant*.—The system consisting of all the engines, drive system components (if applicable), and propellers (if installed), their accessories, ancillary parts, and fuel and oil systems installed on an aircraft but excluding the rotors for a helicopter.

(460) *Power-Unit*.—A system of one or more engines and ancillary parts which are together necessary to provide thrust, independently of the continued operation of any other powered-unit(s), but not including short period thrust-producing devices.

(461) *Practical Test*.—See Skill test.

(462) *Pressure altitude*.—An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

(463) *Primary Standard*.—A standard defined and maintained by a State Authority and used to calibrate secondary standards.

(464) *Printed Communications*.—Communications which automatically provide a permanent printed record at each terminal of a circuit of all messages which pass over such circuit.

(465) *Pre-flight Inspection*.—The inspection carried out before flight to insure that the aircraft is fit for the intended flight.

(466) *Prescribed*.—A rule of construction in Part 1.1.1.1.(a)(8) that means the Authority has issued written policy or methodology which imposes either a mandatory requirement, if the written policy or methodology states "shall," or a discretionary requirement if the written policy or methodology states "may."

(467) *Pressure-altitude*.—An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

(468) *Pressurised Aircraft*.—For airman-licensing purposes, means an aircraft that has a service ceiling or maximum operating altitude, whichever is lower, above 25,000 feet MSL.

(469) *Preventive Maintenance*.—Simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations.

(470) *Problematic use of Substances*.—The use of one or more psychoactive substances by aviation personnel in a way that :

(*i*) Constitutes a direct hazard to the user or endangers the lives, health or welfare of others ; and/or

(*ii*) Causes or worsens an occupational, social, mental or physical problem or disorder.

(471) *Procedure*.—A way of documenting a process.

(472) *Process*.—A set of interrelated or interacted activities which transforms inputs into outputs.

(473) *Proficiency Check*.—A competency test by a licence holder on the areas of operations contained in the skill test for a particular licence, certificate, rating, or authorisation that is conducted by an authorised representative of the Authority.

(474) *Prohibited Area*.—An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

(475) *Propeller*.—A device for propelling an aircraft that has blades on a powerplant driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of powerplants.

(476) *Proper Shipping Name*.—The name to be used to describe a particular article or substance in all shipping documents and notifications and, where appropriate, on packaging.

(477) *Psychoactive Substances.*—Alcohol, opiods, canabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

(478) *Psychosis.*—A mental disorder in which the individual has manifested delusions, hallucinations, grossly bizarre or disorganised behaviour, or other commonly accepted symptoms of this condition; or the individual may reasonably be expected to manifest delusions, hallucinations, grossly bizarre or disorganised behaviour, or other commonly accepted symptoms of this condition.

(479) *Public Aircraft.*—An aircraft used exclusively in the service of any government or of any political jurisdiction thereof, including the Government of Nigeria but not including any government owned aircraft engaged in operations which meet the definition of commercial air transport operations.

(480) *Qualification based Training.*—Training designed to ensure that graduates demonstrate the necessary minimum skill, knowledge and experience levels to meet the qualification requirements of the licence, rating or privilege.

(481) *Quality.*—The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

(482) *Quality Assurance.*—Quality assurance, as distinguished from quality control, involves activities in the business, systems, and technical audit areas. A set of predetermined, systematic actions which are required to provide adequate confidence that a product or service satisfies quality requirements.

(*i*) *Quality Assurance* (*as related to ATO*).—All the planned and systematic actions necessary to provide adequate confidence that all training activities satisfy given standards and requirements, including the ones specified by the approved training organisation in relevant manuals.

(483) *Quality Audit*—A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

(484) *Quality Control.*—The regulatory inspection process through which actual performance is compared with standards, such as the maintenance of standards of manufactured aeronautical products, and any difference is acted upon.

(485) *Quality inspection.*—That part of quality management involving quality control. In other words, inspections accomplished to observe events/actions/documents, etc., in order to verify whether established operational procedures and requirements are fulfilled during the accomplishment of the event or action, and whether the required standard is achieved. Student stage checks and skill tests are quality inspections, and they are also quality control functions.

(486) *Quality Management.*—A management approach focused on the means to achieve product or service quality objectives through the use of its four key components: quality planning; quality control; quality assurance; and quality improvement.

(487) *Quality Manager.*—The manager responsible for the monitoring function and for requesting remedial action. In an ATO, the Quality Manager is responsible directly to the Head of Training.

(488) *Quality Manual.*—The document containing the relevant information pertaining to the approved training organisation's quality assurance system.

(489) *Quality of Training.*—The outcome of the training that meets stated or implied needs within the framework of set standards.

(490) *Quality System.*—Documented organisational procedures and policies; internal audit of those policies procedures; management review and recommendation for quality improvements.

(491) *Radian* (*rad*).—The plane angle between two radii of a circle which cut off on the circumference an arc equal in length to the radius.

(492) *Radiotelephony.*—A form of radiocommunication primarily intended for the exchange of information in the form of speech.

(493) *Rated Air Traffic Controller*.—An air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

(494) *Rated Thrust.*—For engine emissions purposes, the maximum take-off thrust approved by the certificating authority for use under normal operating conditions at ISA sea level static conditions, and without the use of water injection. Thrust us expressed in kilonewtons.

(495) *Rating.*—An authorisation entered on or associated with a licence or certificate and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence or certificate.

(496) *Rebuild.*—The restoration of an aircraft/aeronautical product by using methods, techniques, and practices acceptable to the Authority, when it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.

(497) *Rendering* (*a certificate of airworthiness*) *Valid.*—The action taken by a Contracting State, as an alternative to issuing its own Certificate of Airworthiness, in accepting a Certificate of Airworthiness issued by any other Contracting State as the equivalent of its own Certificate of Airworthiness.

(498) *Reference Pressure Ratio.*—The ratio of the mean total pressure at the last compressor discharge plane of the compressor to the mean total pressure at the compressor entry plane when the engine is developing take–off thrust rating in ISA sea level static conditions.

Note : Methods of measuring reference pressure ratio are given in Appendix 1.

(499) *Reference Standard.*—A standard that is used to maintain working standards.

(500) *Register.*—Means the register of Nigeria Civil Aircraft referred to in part 4 of these regulations.

(501) *Re-issue of a Licence, Rating, Authorisation or Certificate.*—The administrative action taken after a licence, rating, authorisation or certificate has lapsed that re-issues the privileges of the licence, rating, authorisation or certificate for a further specified period consequent upon the fulfilment of specified requirements.

(502) *Remote Pilot.*—A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

(503) *Remote Pilot Station*—The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

(504) *Remotely piloted Aircraft* (*RPA*).—An unmanned aircraft which is piloted from a remote pilot station.

(505) *Remotely piloted aircraft system* (RPAS).—A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

(506) *Renewal of Licence, Rating, Authorisation or Certificate.*—The administrative action taken within the period of validity of a licence, rating, authorisation or certificate that allows the holder to continue to exercise the privileges of a licence, rating, authorisation or certificate for a further specified period consequent upon the fulfilment of specified requirements.

(507) *Repair.*—

(*i*) The restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements.

(*ii*) The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear.

(508) *Repetitive flight plan* (*RPL*).—A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATC units.

(509) *Reporting Point.*—A specified geographical location in relation to which the position of the aircraft can be reported.

(510) *Required Communication Performance* (*RCP*).—A statement of the performance requirements for operational communication in support of specific ATM functions.

(511) *Required Communication Performance type* (*RCP Type*).—A label (e.g. RCP 240) that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

(512) *Required inspection items.*—As used in Part 5, maintenance items and/or alterations that must be inspected by a person other than the one performing the work, and include at least those that could result in a failure, malfunction, or defect endangering the safe operation of the aircraft, if not properly performed or if improper parts or materials are used.

(513) *Required navigation performance* (*RNP*).—A statement of the navigation performance necessary for operations with a defined airspace.

(514) *Rescue Co-ordination Centre.*—A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

(515) *Rest Period.*—A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

(516) *Restricted Area.*—An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

(517) *RNP Type.*—A containment value expressed as a distance in nautical miles from the intended position within which flights would be for at least 95 per cent of the total flying time.

Example.—RNP 4 represents a navigation accuracy of plus or minus 7.4 km (4NM) on a 95 per cent containment basis.

(518) *Rotorcraft.*— A power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors.

(519) *Rotorcraft Flight Manual.*—A manual, associated with the certificate of airworthiness, containing limitations within which the rotorcraft is to be considered airworthy, and instructions and information necessary to the flight crew members of the safe operation of the rotorcraft.

(520) *Rotorcraft Load Combinations*.—Configurations for external loads carried by rotorcraft—

(*i*) *Class A.*—external load fixed to the rotorcraft, cannot be jettisoned, and does not extend below the landing gear, used to transport cargo ;

(*ii*) *Class B.*—external load suspended from the rotorcraft, which can be jettisoned, and is transported free of land or water during rotorcraft operations ;

(*iii*) *Class C.*—external load suspended from the rotorcraft, which can be jettisoned, but remains in contact with land or water during rotorcraft operation ;

(*iv*) *Class D.*—external load suspended from the rotorcraft for the carriage of persons.

(521) *Route Sector.*—A flight comprising take off, departure, cruise of not less than 15 minutes, arrival, approach and landing phases.

(522) *RPA Observer.*—A trained and competent person designed by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

(523) *Runway.*—A defined rectangular area on a land aerodrome prepared for the landing and takeoff of aircraft.

(524) *Runway-holding position.*—A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/ sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorised by the aerodrome control tower.

(525) *Runway Strip.*—A defined area including the runway and stopway, if provided, intended :

(*i*) to reduce the risk of damage to aircraft running off a runway ; and

(*ii*) to protect aircraft flying over it during take-off or landing operations.

(526) *Runway Visual Range* (RVR).—The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

(527) *Safe Forced Landing.*—Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

(528) *Safety.*—The State in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.

(529) *Safety-sensitive personnel.*—Persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.

(530) *Safety Management System* (SMS).—A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures.

(531) *Safety Performance.*—A state or a service provider's safety achievement as defined by its safety performance targets and safety performance indicators.

(532) *Safety performance indicator.*—A data-based parameter used for monitoring and assessing safety performance.

(533) *Safety performance Target.*—The planned or intended objective for safety performance indicator(s) over a given period.

(534) *Safety programme.*—An integrated set of regulations and activities aimed at improving safety.

(535) Safety recommendation.—A proposal of the accident investigation authority of the State conducting the investigation, based on information derived from the investigation made with the intention of preventing accidents or incidents.

(536) *Safety Risk.*—The Predicted probability and severity of the consequences or outcomes of a hazard.

(537) *Satellite Aviation Training Organisation.*—An aviation training organization at a location other than the aviation training organisation's principal place of business.

(538) *Satisfactory evidence.*—A set of documents or activities that a Contracting State accepts as sufficient to show compliance with an airworthiness requirement.

(539) *Second* (*s*).—The duration of 9 192 63 1 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom.

(540) *Secondary standards*.—A standard maintained by comparison with a primary standard.

(541) *Serious incident.*—An incident involving circumstances indicated that an accident nearly occurred.

(542) *Serious injury.*—An injury which is sustained by a person in an accident and which :

(*i*) Requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received ;

(*ii*) Results in a fracture of any bone (except simple fractures of fingers, toes or nose) ; or

(*iii*) Involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage ; or

(*iv*) Involves injury to any internal organ ; or

(*v*) Involves second or third degree burns, or any burns affecting more than 5% of the body surface ; or

(*vi*) Involves verified exposure to infectious substances or injurious radiation.

(543) *Shall.*—A rule of construction in Part 1.1.1.1(*a*)(1) that indicates a mandatory requirement.

(544) *Shoulder.*—An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

(545) *Siemens* (S).—The electric conductance of a conductor in which a current of 1 ampere is produced by an electric potential difference of 1 volt.

(546) *Sievert* (Sv).—The unit of radiation dose equivalent corresponding to 1 joule per kilogram.

(547) *SIGMET information.*—Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

(548) *Signal Area.*—An area on an aerodrome used for the display of ground signals.

(549) *Signature.*—An individual's unique identification used as a means of authenticating a record entry or record. A signature may be hand-written, electronic, or any other form acceptable to the Authority.

(550) *Signed Maintenance Release.*—To certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness, by issuing the maintenance release referred to in Part 5.

(551) *Significant.*—In the context of the medical provisions in Part 2.11, significant means to a degree or of a nature that is likely to jeopardise flight safety.

(552) *Significant point.*—A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

(553) *Skill Test.*—A competency test on the areas of operations for a licence, certificate, rating, or authorisation that is conducted by having the applicant respond to questions and demonstrate manoeuvres in flight, or in an approved flight simulation training device, or in a combination of these.

(554) *Small Aeroplane.*—An aeroplane having a maximum certified takeoff mass of less than 5,700 kg. (12,500 lbs.).

(555) *Smoke.*—The carbonaceous materials in exhaust emissions which obscure the transmission of light.

(556) *Smoke Number*.—The dimensionless term quantifying smoke emissions (see 3 of Appendix 2).

(557) *Solo Flight.*—Flight time during which a student pilot is the sole occupant of the aircraft, or that flight time during which the student acts as a PIC of a gas balloon or an airship requiring more than one flight crewmember.

(558) *Spare parts.*—Any parts, appurtenances, and accessories of aircraft (other than aircraft engines and propellers), of aircraft engines (other than propellers), of propellers, and of appliances, maintained for installation or use in an aircraft, aircraft engine, propeller, or appliance, but which at the time are not installed therein or attached thereto.

(559) *Special aircraft jurisdiction of Nigeria.*—This includes:

(*i*) Civil aircraft of Nigeria ; and

(*ii*) Any other aircraft within the jurisdiction of Nigeria, while the aircraft is in flight, which is from the moment when all external doors are closed following embarkation until the moment when one such door is opened for disembarkation or, in case of a forced landing, until the competent authorities take over the responsibility of the aircraft and the persons and property aboard.

(560) *Special Curricula.*—A closely supervised, systematic and continuous course of training, conforming to a planned syllabus or curriculum, and conducted in an approved training organisation.

(561) *Special VFR flight.*—A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

(562) *Specialised Maintenance*.—Any maintenance not normally performed by an AMO (e.g., tire retreating, plating, etc.)

(563) *Specific Operating Provisions*.—The Specific Operating Provisions describe the ratings (Class and/or Limited) in detail and will contain or reference material and process specifications used in performing repair work, along with any limitations applied to the maintenance organisation. The accountable manager and the Authority sign this document.

(564) *Standard*.—An object, artifact, tool, test equipment, system, or experiment that stores, embodies, or otherwise provides a physical quantity, which serves as the basis for measurement of the quantity. It also includes a document describing the operations and process that must be performed in order for a particular end to be achieved.

(565) *Standard Atmosphere*.—An atmosphere defined as follows :

(*a*) the air is a perfect dry gas ;

(*b*) the physical constants are—

Sea level mean molar mass :

M_0 = 28.964 420 × 10–3 kg mol–1
— Sea level atmospheric pressure :
P_0 = 1 013.250 hPa
— Sea level temperature :
t_0 = 15°C
T_0 = 288.15 K
— Sea level atmospheric density :
$ñ_0$ = 1.225 0 kg m–3
— Temperature of the ice point :
T_i = 273.15 K
— Universal gas constant :
R* = 8.314 32 JK–1mol–1

(*c*) the temperature gradients are :

Geo-potential altitude (km)		*Temperature gradient* (*Kelvin per standard geopotential kilometre*)
From	To	
–5.0	11.0	-6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	-2.8
71.0	80.0	-2.0

Note 1.—*The standard geopotential metre has the value* 9.80665 *m*2 *s*–2.

Note 2.— See Doc 7488 for the relationship between the variables and for tables giving the corresponding values of temperature, pressure, density and geopotential.

Note 3.— *Doc 7488 also gives the specific weight, dynamic viscosity, kinematic viscosity and speed of sound at various altitudes.*

(566) *State of Aerodrome.*—The State in whose territory the aerodrome is situated.

(567) *State of Destination.*—The State in the territory the territory of which the consignment is finally to be unloaded from an aircraft.

(568) *State of Design.*—The State having jurisdiction over the organisation responsible for the type design.

(569) *State of Manufacture.*—The State having jurisdiction over the organisation responsible for the final assembly of the aircraft.

(570) *State of Occurrence.*—The State in the territory of which an accident or incident occurs.

(571) *State of the Operator.*—The State in which the operator’s principal place of business is located, or, if there is no such place of business, the operator’s permanent residence.

(572) *State of Origin*.—The State in the territory of which the consignment is first to be loaded on an aircraft.

(573) *State of Registry.*—The State on whose register an aircraft is entered.

Note : In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attached to a State of Registry. See, in this regard the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).

(574) *State safety programme.*—An integrated set of regulations and activities aimed at improving safety.

(575) *Station Declination.*—An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

(576) *Steradian* (*sr*).—The solid angle which, having its vertex in the centre of a sphere, cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere

(577) *Substantial Damage.*—Damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered "substantial damage" for the purpose of this substantial damage relating to an aircraft accident.

(578) *Syllabus* (*Training*).—The detailed summary or outline describing the main points of a course.

(579) *Synthetic Flight Trainer.*—See Flight simulation training device.

(580) *Synthetic Vision System.*—A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.

(581) *Take off and initial Climb Phase.*—That part of the flight from the start of take-off to 300m (1000ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.

(582) *Takeoff decision point.*—The point used in determining takeoff performance of a Class 1 helicopter from which, an engine failure occurring at this point, either a rejected takeoff may be made or a takeoff safely continued.

(583) *Take-off surface.*—The part of the surface of an aerodrome which the aerodrome authority has declared available for the Norman ground or water run of aircraft taking off in a particular direction.

(584) *Target level of Safety* (TLS).—A generic term representing the level of risk which is considered acceptable in particular circumstances.

(585) *Taxiing.*—Movement of an aircraft on the surface of an aerodrome under its own power, excluding takeoff and landing.

(586) *Taxiway.*— A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including :

(*i*) *Aircraft stand Taxilane.*—A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

(*ii*) *Apron Taxiway.*—A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

(*iii*) *Rapid Exit Taxiway.*—A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimising runway occupancy times.

(587) *Technical log.*—A document carried on an aircraft that contains information to meet ICAO requirements; a technical log contains two independent sections: a journey record section and an aircraft maintenance record section.

(588) *Technical Instructions.*—The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council.

(589) *Terminal Control Area.*—A control area normally established at the confluence of ATC routes in the vicinity of one or more major aerodromes.

(590) *Terrain awareness warning system.*—A system that provides the flight crew with sufficient information and alerting to detect a potentially hazardous terrain situation and so the flight crew may take effective action to prevent a controlled flight into terrain (CFIT) event.

(591) *Tesla* (*T*).—The magnetic flux density given by a magnetic flux of 1 weber per square metre.

(592) *Threat.*—As relating to flight, events or errors that occur beyond the influence of the flight crew, increase operational complexity and which must be managed to maintain the margin of safety.

(593) *Threat Management*—The process of detecting and responding to the threats with countermeasures that reduce or eliminate the consequences of threats, and mitigate the probability of errors or undesired aircraft.

(594) *Threshold Time.*—The range, expressed in time, established by the State of the Operator, to an en-route alternate aerodrome, whereby any time beyond requires an extended diversion time operation approval from the State of the Operator.

(595) *Tonne* (*t*).—The mass equal to 1 000 kilograms.

(596) *Total Estimated Elapsed Time.*—For IFR flights, the estimated time required from takeoff to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from takeoff to arrive over the destination aerodrome.

(597) *Total Vertical Error* (*TVE*).—The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).

(598) *Traceability.*— A characteristic of a calibration, analogous to a pedigree. A traceable calibration is achieved when each Measurement Device and Working Standard, in a hierarchy stretching back to the National Standard, was itself properly calibrated, and the results properly documented. The documentation provides the information needed to show that all calibrations in the chain of calibrations were properly performed.

(599) *Track*.—The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

(600) *Traffic Avoidance Advice*.—Advice provided by an air traffic services unit specifying manoeuvres to assist a pilot to avoid a collision.

(601) *Traffic Information.*—Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

(602) *Training Manual*.—A manual containing the training goals, objectives, standards syllabi, and curriculum for each phase of the approved training course.

(603) *Training and Procedures Manual*.—A manual containing procedures, instructions and guidance for use by personnel of an Approved Training Organisation in the execution of their duties in meeting the requirements of the certificate. It may be a combined manual or separated into a Training Manual and a Procedures Manual—

(*i*) *Training Manual*.—A manual containing the training goals, objectives, standards, syllabi, and curriculum for each phase of the approved training course.

(*ii*) *Procedures Manual*.—A manual containing procedures, instructions and guidance for use by personnel of the ATO in the execution of their duties in meeting the requirements of the certificate.

(604) *Training Specifications*.—A document issued to an Aviation Training Organisation certificate holder by the Authority that specifies training programme requirements and authorises the conduct of training, checking, and testing with any limitations thereof.

(605) *Training to Proficiency.*—The process of the check pilot administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period.

(606) *Training programme*.—Programme that consists of courses, courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective. It may include a core curriculum and a specialty curriculum.

(607) *Transfer of Control Point.*—A defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next.

(608) *Transfer Standard*.—Any standard that is used to compare a measurement process, system, or device at one location or level with another measurement process, system or device at another location or level.

(609) *Transition altitude*.—The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

(610) *Training Time*.—The time spent receiving from an authorised instructor flight training, ground training, or simulated flight training in an approved flight simulation training device.

(611) *Training to proficiency*.—The process of the check airman administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period.

(612) *Type Certificate.*—A document issued by a Contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that State.

(613) *Ultimate Load.*—The limit load multiplied by the appropriate factor of safety.

(614) *Unaided Night Flight.*—For a flight in which a pilot uses night vision goggles, the portion of the flight in which the pilot does not use night vision goggles to maintain visual surface reference.

(615) *Uncertainty Phase.*—A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

(616) *Undesired Aircraft State.*—Occurs when the flight crew places the aircraft in a situation of unnecessary risk. (ICAO Annex 1).

(617) *UN Number.*—The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals to identify an article or substance or a particular group of substances.

(618) *Unit Load Device*.—Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

(619) *Unmanned free Balloon*.—A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

(620) *Unserviceable Area.*—A part of the movement area that is unfit and unavailable for use by aircraft.

(621) *Validation.*—The action taken by Authority as an alternative to issuing its own licence, in accepting a licence issued by another Contracting State as the equivalent of its own licence for use on aircraft registered in Nigeria. Also may be referred to as rendering a licence valid.

(622) *Validation of a Certificate of Airworthiness.*—The action taken by the Authority, as an alternative to issuing its own Certificate of Airworthiness, in accepting a Certificate of Airworthiness issued by any other Contracting State as the equivalent of its own Certificate of Airworthiness.

(623) *VFR.*—The symbol used to designate the visual flight rules.

(624) *VFR flight.*—A flight conducted in accordance with the visual flight rules.

(625) *Visibility.*—Visibility for aeronautical purposes is the greater of :

(*i*) The greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognised when observed against a bright background ;

(*ii*) The greatest distance at which lights in the vicinity of 1,000 candelas can be seen and identified against an unlit background.

(626) *Visual line-of-Sight* (*VLOS*) *Operation*.—An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft.

(627) *Visual Meteorological Conditions.*—Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

(628) *VMC*.—The symbol used to designate visual meteorological conditions.

(629) *Volt* (*V*).**—**he unit of electric potential difference and electromotive force which is the difference of electric potential between two points of a conductor carrying a constant current of 1 ampere, when the power dissipated between these points is equal to 1 watt.

(630) *Watt* (*W*).—The power which gives rise to the production of energy at the rate of 1 joule per second.

(631) *Waypoint.*—A specified geographical location used to define an area navigation.

(632) *Weber* (*Wb*).—The magnetic flux which, linking a circuit of one turn, produces in it an electromotive force of 1 volt as it is reduced to zero at a uniform rate in 1 second.

(633) *Wet lease.*—The lease of an aircraft with crew and other back-up.

(634) *Will.*—A rule of construction in Part 1.1.1.1 (*a*) (4) that indicates an action incumbent upon the Authority.

1.6. LANGUAGE OF THESE REGULATIONS

(*a*) The English Language shall be the Language of these Regulations.

(*b*) Manuals, Certificates or Licences being submitted to the Authority must be in English language.

(*c*) If the Original Manual is in a Language other than English, a Certified English Translation must be submitted.

(*d*) When a Certificate or Licence is issued in a Language other than English, it shall include a certified English translation.

1.7. PROCEDURES FOR MAKING AND AMENDING REGULATIONS

(*a*) There shall be established by the Director General of the Authority a Regulations Committee (hereinafter referred to as "The Committee").

(*b*) The Committee shall be a Standing Committee within the Authority.

(*c*) The Committee shall be responsible for :

(1) Monitoring amendments to the Standards and Recommended Practices contained in the Annexes to the Convention on International Civil Aviation ;

(2) Incorporating the amendments into these Regulations ;

(3) Consideration of proposals for amendment to these Regulations made by stakeholders and other members of the Public ;

(4) Proposing on its motion, amendments to the Regulations ;

(5) Notification of and filing with ICAO of differences and Compliance with the SARP's.

(*e*) (1) The Committee shall send Notice of Proposed Amendments (NPA) to operators and other stakeholders and request their comments thereto within a period of 30 days.

(2) Upon receipt of comments, the Committee may consider and Incorporate same into the Regulations.

(3) The Committee shall keep a record of such comments and its deliberations thereon.

(*f*) Submission of Proposal.

(1) Any interested person may submit to the Regulations Committee, a proposal on the introduction, amendment or withdrawal of a regulation or technical standard ;

(2) The proposal shall be in writing and shall :

(*i*) state the name and address of the proposer ;

(*ii*) state the contents of the regulation, technical standard or amendment proposed or specify the regulation or technical standard which the proposer wishes to be withdrawn ;

(*iii*) explain the interests of the proposer ; and

(*iv*) contain any information, views or arguments supporting the proposal.

(*g*) All amendments to these Regulations shall be signed and Published by the Director General of the Authority.

Citation, Repeals and Savings Provision.

1.8. These Regulations shall be cited as Nigeria Civil Aviation Regulations 2015 (Nig. Cars 2015).

The Regulations cited as Nigeria Civil Aviation Regulations 2009 (Nig. CARs) Volume 1 and Nigeria Civil Aviation Regulations 2012 (Nig. CARs) Volume 2 are hereby repealed and cease to have a force of law save for the Schedule of Fees published therein which shall remain in force until amended by the Authority.

SI Unit of Measurement.

1.9.—(1) The International System of Units developed and maintained by the General Conference of Weight and Measures (CGPM) shall, subject to the provision of subsection (*a*) and (*b*) below, be used as the standard system of units of measurement for all aspects of Civil Aviation Air and Ground Operations in Nigeria.

(*a*) The prefixes and symbols of listed in table 2.1 of IS 1.9 to these Regulations shall be used to form names and symbols of the decimal multiples and sub-multiples of SI units.

(*b*) The non-SI units listed in table 2.2 of IS 1.9 to these Regulations shall be used either in lieu of, or in addition to SI units as primary units of measurement but only as specified in table 2.3.

(*c*) The non-SI units listed in table 2.3 of IS 1.9 to these Regulations shall be permitted for temporary use as alternative units of measurement but only for those specific quantities listed in table 2.4 of IS 1.9 to these Regulations.

(*d*) The application of units of measurement for certain quantities used in civil aviation air and ground operations shall be in accordance with table 2.4.

(*e*) All persons involved in civil aviation air and grounds operations shall ensure that means and provisions for design, procedures and training are established for operations in environment involving the use of standard and non-SI alternatives of specific units of measurements, or the transition between environments using different units, with due consideration to human performance.

(*f*) The use in International Civil Aviation Operations of the alternative non-SI units listed in table 2.3 shall be terminated on the dates to be specified by ICAO.

1.10. Appeal Procedure

1.10.1 Any person who disagrees with the administrative or legal enforcement actions or decisions of the Authority under the provisions of these Regulations may appeal for a review within seven (7) days from the date of the imposition of the sanction.

1.10.2. The appeal shall be in writing and addressed to the Director-General of the Authority.

1.10.3. Upon receipt of the appeal, the Director-General may constitute an Appeal Panel made up of five (5) members comprising of two (2) persons from the Nigeria Civil Aviation Authority and three (3) aviation industry stakeholders.

1.10.4. Any sanction and /or decision imposed by the Authority shall subsist until set aside or varied by the Director-General upon recommendation of the Appeal Panel.

PART 1—IMPLEMENTING STANDARDS

IS 1.2.1.8. List of Psychoactive Substances.

(*a*) The following are deemed to be psychoactive substances :

(1) Alcohol.

(2) Opioids.

(3) Cannabinoids.

(4) Sedatives and hypnotics.

(5) Cocaine and other stimulants (except caffeine).

(6) Hallucinogens.

(7) Volatile solvents.

IS 1.3.3. Legal Enforcement Actions.

(*a*) These sanction guidance tables provide a recommended approach to assessment of sanctions for violations of these Regulations.

(*b*) These tables describe civil penalties as minimum, moderate, or maximum for a single violation of a particular Regulation, in accordance with the Civil Aviation Act and these Regulations. These terms are defined as in the following tables.

(*c*) Every repetition of a contravention of the provision of these regulations may be treated as a fresh offence with penalties to apply consecutively in each case.

(*d*) Sanctions for violations not provided for in the Table of Sanctions in IS.1.3.3 will be determined under a similar violation of a comparable gravity as recommended on the Table.

TABLE 1—TABLE OF CIVIL PENALTIES

Party Committing Violation	*Amount of Civil Penalty*
Air Carriers	Maximum : ₦5,000,000.00 Moderate : ₦2,000,000.00 Minimum : ₦500,000.00
Aerodrome Operators/ Air Navigation Service Providers	Maximum : ₦10,000,000.00 Moderate : ₦5,000,000.00 Minimum : ₦2,500,000.00
Air Carrier Personnel	Maximum : ₦200,000.00 Moderate : ₦100,000.00 Minimum : ₦50,000.00
General Aviation Owners, Operators, Aircraft Maintenance Engineers, other licensed and non-licensed persons	Maximum : ₦1,000,000.00 Moderate : ₦500,000.00 Minimum : ₦250,000.00
Approved Maintenance Organisations/ Approved Training Organisations.	Maximum : ₦2,500,000.00 Moderate : ₦1,500,000.00 Minimum : ₦500,000.00
Allied Service Providers	Maximum : ₦500,000.00 Moderate : ₦250,000,00 Minimum : ₦100,000.00
Persons(s) other than Aviation Personnel/ Organisation	Maximum : ₦200,000.00 Moderate : ₦100,000.00 Minimum : ₦50,000,00

TABLE 2—RECOMMENDED SANCTIONS

Violation	*Recommended Sanction per Violation*	*Certificate Action*
I. AIR OPERATORS AND AIRPORT OPERATORS		
1. *Maintenance Manual*		
(*a*) Failure to maintain current manual.	Maximum civil penalty.	Up to 7 day suspension.
(*b*) Failure to provide adequate instructions and procedures in manual.	Moderate to maximum civil penalty.	
(*c*) Failure to distribute manual to appropriate personnel.	Minimum to moderate civil penalty.	
(*d*) Release of aircraft without required equipment.	Moderate to maximum civil penalty.	Up to 7 day suspension
2. Failure to comply with airworthiness directives.	Moderate to maximum civil penalty,	
3. Operations specifications :		
(*a*) Failure to comply with inspection and overhaul time limitations.	Moderate civil penalty.	Up to 7 day suspension
(*b*) Operations contrary to operations specifications—technical noncompliance.	Minimum civil penalty	
(*c*) Operations contrary to operations specifications—likely potential or actual adverse effect on safe operations.	Moderate to maximum civil penalty.	
4. Failure to provide adequately for proper servicing, maintenance, repair, and inspection of facilities and equipment.	Maximum civil penalty.	Indefinite suspension until proper servicing maintenance, repair, and inspection of facilities and equipment is provided to revocation.
5. Failure to provide or maintain a maintenance and inspection organization.	Maximum civil penalty.	Indefinite suspension until appropriate maintenance and inspection organisation is provided to revocation.
(*i*) Failure to prepare, keep and maintain current operations manual.	Maximum Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
6. Training programme : (*a*) Failure to have or maintain an effective training programme.	Maximum civil penalty.	Indefinite suspension until compliance is demonstrated to revocation.
(*b*) Failure to maintain training programme.	Moderate to maximum civil penalty.	
(*c*) Failure to train personnel adequately.	Moderate to maximum civil penalty.	
7. Maintenance of Aircraft Paperwork.	Moderate to maximum civil penalty.	
(*a*) Incomplete or unsigned release.	Minimum to maximum civil penalty.	
(*b*) Failure to revise aircraft data after repair.	Moderate to maximum civil penalty.	
8. Performance of maintenance.	Maximum civil penalty.	
(*a*) By unauthorised person.	Maximum civil penalty.	
(*b*) Failure to perform or improper maintenance.	Moderate to maximum civil penalty.	
9. Failure to revise aircraft data after repair.	Moderate to maximum civil penalty.	
10. Records and Reports. (*a*) Failure to make accurate mechanical interruption summary report.	Moderate to maximum civil penalty.	
(*b*) Failure to make available reports of major alterations or repairs.	Moderate to maximum civil penalty.	Indefinite suspension to revocation.
(*c*) Failure to make accurate mechanical reliability reports.	Moderate to maximum civil penalty.	
(*d*) Failure to keep maintenance records.	Maximum civil penalty.	7-day suspension and thereafter until aircraft is in airworthy conditions.
(*e*) Failure to make required entry in aircraft log.	Moderate to maximum civil penalty.	
(*f*) Failure to make available pilot records.	Moderate to maximum civil penalty.	Indefinite suspension to revocation.
(*g*) Failure to make available load manifests.	Moderate to maximum civil penalty.	Indefinite suspension to revocation.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*h*) Failure to monitor and record enroute radio communications.	Moderate to maximum civil penalty.	
(*i*) Deliberate violation—intentional false or fraudulent entry ; reproduction, or alteration in record or report.		Revocation.
(*j*) Deliberate violation—other.		180 day suspension to revocation.
11. Operation of an unairworthy Aircraft.		
(*a*) Technical non-conformity to type certificate, but no likely effect (potential or actual) on safe operation.	Minimum civil penalty.	
(*b*) Non-conformity which may have, or has, an adverse effect on safety of operation.	Moderate to maximum civil penalty.	
(*c*) Release of aircraft without required equipment.	Moderate to maximum civil penalty.	Up to 7 day suspension.
12. Provisions specific to passenger-carrying. (*a*) Boarding or serving alcoholic beverages to a person who appears to be intoxicated.	Maximum civil penalty.	
(*b*) Failure to brief passengers.	Moderate to maximum civil penalty.	
(*c*) Failure to ensure seat and belt for each passenger.	Maximum civil penalty.	
(*d*) Operation without operable public address system.	Maximum civil penalty.	
(*e*) Failure to store baggage properly.	Moderate civil penalty.	
13. Failure to make available a seat on the flight deck for Authority inspectors conducting an en route inspection.	Maximum civil penalty.	
14. Provisions specific to flight deck crew.		
(*a*) Using an unqualified crewmember.	Maximum civil penalty.	
(*b*) Using a crewmember with an expired medical certificate.	Minimum to moderate civil penalty.	
(*c*) Flight and duty time violations.	Moderate civil penalty.	
15. Violation of flight dispatch and release.	Moderate to maximum civil penalty.	
16. Other provisions.		
(*a*) Improperly returning an aircraft to service.	Maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*b*) Illegal carriage of controlled substance with knowledge of carrier, i.e., knowledge of management personnel.	Maximum civil penalty	Revocation
(*c*) Use of unqualified personnel other than flight deck crewmember.	Maximum civil penalty.	
17. Security violations.		
(*a*) Failure to properly screen baggage or each passenger.	Maximum civil penalty	
(*b*) Unauthorised access to airport operations area.	Maximum civil penalty.	
(*c*) Failure to comply with air carrier security programme, including failure to detect weapons, incendiary and other dangerous devices.	Maximum civil penalty.	
(*d*) Management personnel coerce, condone, or encourage falsification of records/ reports.		Revocation
(*e*) Deliberate failure to maintain employee records.	Moderate civil penalty.	
(*f*) Failure to challenge.	Moderate civil penalty.	
(*g*) Failure to test screeners or test equipment.	Moderate civil penalty.	
(*h*) Failure to properly train. (*i*) Unintentional failure to maintain screener test records.	Moderate civil penalty. Minimum to moderate civil penalty.	
(*j*) Improper use of dosimeters.	Minimum civil penalty.	
(*k*) Failure to display identification.	Minimum to moderate civil penalty.	
(*l*) Failure to manage/control identification system.	Maximum civil penalty.	
(*m*) Failure to conduct background check.	Minimum to moderate civil penalty.	
(*n*) Failure to detect test objects.	Maximum civil penalty.	
(*o*) Failure to comply with approved or current security programme.	Maximum civil penalty.	
(*p*) Failure of the law enforcement officer to respond in a timely manner.	Maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
II. PERSONNEL OF AIR CARRIERS **1. Maintenance, including inspections.** (*a*) Performing maintenance without a licence, rating or authorisation.	Maximum civil penalty.	
(*b*) Performing maintenance that exceeds limitations.		30 to 45 day suspension.
(*c*) Failure to perform maintenance properly.		30 to 120 day suspension.
2. Inspection personnel.		
(*a*) Failure to make required inspection.		30 to 60 day suspension.
(*b*) Making improper inspection.		30 to 120 day suspension.
(*c*) Improperly releasing an aircraft to service.		30 to 60 day suspension.
(*d*) Releasing aircraft for service without required equipment.		30 to 60 day suspension.
3. Records and Reports.		
(*a*) Failure to make entries in aircraft log.		15 to 60 day suspension.
(*b*) Failure to make entries in worksheets.		15 to 30 day suspension.
(*c*) Failure to make entries in other maintenance record.		15 to 30 day suspension.
(*d*) Failure to sign off work or inspection performed.		15 to 30 day suspension.
(*e*) Failure to complete and sign maintenance release.		15 to 30 day suspension.
(*f*) Intentional falsification of records or reports.		Revocation
4. Pre-flight.		
(*a*) Failure to use pre-flight cockpit checklist.		30 to 60 day suspension.
(*b*) Failure to check aircraft logs, flight manifests, weather, etc.		30 to 90 day suspension.
(*c*) Failure to make the required inspection.		30 to 60 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*d*) Failure to inspect, or improper inspection of, aircraft.		15 to 30 day suspension.
(*e*) Failure to ensure seat and belt available for each passenger.		30 to 60 day suspension.
5. Taxing.		
(*a*) Failure to adhere to taxi clearance or instruction.		30 to 60 day suspension.
(*b*) Collision while taxiing.		30 to 180 day suspension.
(*c*) Jet blast.		30 to 120 day suspension.
(*d*) Taxiing with passenger standing.		30 to 60 day suspension.
(*e*) Taxiing off runway, taxiway or ramp.		30 to 90 day suspension.
6. Take-off.		
(*a*) Takeoff against instruction or clearance.		60 to 120 day suspension.
(*b*) Takeoff below weather minima.		60 to 120 day suspension.
(*c*) Takeoff in overloaded aircraft (in excess of maximum gross weight).		60 to 120 day suspension.
7. Enroute.		
(*a*) Deviation from clearance or instruction.		30 to 90 day suspension.
(*b*) Operating VFR within clouds.		90 day suspension to revocation.
(*c*) Operation of unairworthy aircraft.		30 to 180 day suspension.
(*d*) Unauthorised departure from flight desk.		15 to 30 day suspension.
(*e*) Operating within restricted or prohibited area, or within positive control area with clearance.		30 to 90 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*f*) Operating without required equipment.		15 to 120 day suspension.
(*g*) Fuel mismanagement/exhaustion.		30 to 150 day suspension.
(*h*) Operating contrary to NOTAM.		30 to 90 day suspension.
(*i*) Unauthorised manipulation of controls.		30 to 90 day suspension.
8. Approach to Landing		
(*a*) Deviation from clearance or instruction in terminal area.		30 to 90 day suspension.
(*b*) Approach below weather minimums.		60 to 120 day suspension.
(*c*) Exceeding speed limitation in airport traffic areas.		30 to 60 day suspension.
9. Landing. (*a*) Landing at wrong airport.		90 to 180 day suspension.
(*b*) Deviation from instrument approach procedure.		30 to 90 day suspension.
(*c*) Overweight landing.		30 to 90 day suspension.
(*d*) Hard landing.		15 to 60 day suspension.
(*e*) Short or long landing.		30 to 180 day suspension.
(*f*) Wheels up landing.		15 to 90 day suspension.
(*g*) Failure to comply with preferential runway system.		15 day suspension.
(*h*) Deviating from clearance or instruction.		30 to 90 day suspension.
10. Unauthorised admission to flight deck.		30 to 90 day suspension.
11. Failure to close and lock cockpit door.	Maximum civil penalty.	15 to 30 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
12. Acting, or attempting to act, as flight crewmember while under the influence of liquor or other psychoactive substances, or alcoholic beverage consumption within 8 hours.		Emergency revocation.
13. Denial of authorised entry to flight deck of credentialed CAA inspector.		30 to 60 day suspension.
14. Flight and duty time limitations.		15 to 90 day suspension.
15. Operation without required licence, certificate or rating.		
(*a*) Medical certificate.		30 to 90 day suspension.
(*b*) Lack of type rating.		180 day suspension to revocation.
(*c*) Missed proficiency check or line check.		30 to 90 day suspension.
(*d*) Lack of current experience, initial or recurrent training.		30 to 90 day suspension.
(*e*) Failure to have current medical certificate or licence or authorisation in possession.	Minimum to moderate civil penalty.	
(*f*) Operation with known disqualifying physical disability.		Revocation.
(*g*) Operation without valid medical certificate when not medically qualified or application for medical certificate deferred.		Revocation.
16. Failure to keep manual current.	Minimum civil penalty	30 to 90 day suspension.
III. INDIVIDUALS AND GENERAL AVIATION—OWNERS, PILOTS, MAINTENANCE PERSONNEL, APPROVED MAINTENANCE ORGANISATIONS, APPROVED TRAINING ORGANISATIONS.		
1. Owners and operators other than required crew members.		
(*a*) Failure to comply with airworthiness directives.	Moderate to maximum civil penalty.	
(*b*) Failure to perform or improper performance of maintenance, including required maintenance.	Moderate to maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*c*) Failure to make proper entries in aircraft logs.	Minimum to moderate civil penalty.	
(*d*) Operation of aircraft beyond annual, 100-hour, or progressive inspection.	Minimum to moderate civil penalty.	
(*e*) Operation of unairworthy aircraft.	Maximum civil penalty.	
(*f*) Intentional falsification of any entry, reproduction, or alternation in any record or report.	Maximum civil penalty.	Revocation.
2. Aviation Maintenance Organisations.		
(*a*) Failure to provide adequately for proper servicing, maintenance repairs, and inspection. (*b*) Failure to provide adequate personnel who can perform, supervise, and inspect work for which the station is rated.	Moderate to maximum civil penalty. Maximum civil penalty.	Indefinite suspension until compliance to revocation. to 7-day suspension and thereafter until adequate personnel are provided.
(*c*) Failure to have enough qualified personnel to keep up with the volume of work.	Maximum civil penalty.	to 7-day suspension and thereafter until certificate holder has enough qualified personnel.
(*d*) Failure to maintain records of supervisory and inspection personnel.	Moderate to maximum civil penalty.	
(*e*) Failure to maintain performance records and reports.	Moderate to maximum civil penalty.	
(*f*) Failure to ensure correct calibration of all inspection and test equipment is accomplished at prescribed intervals.	Minimum to maximum civil penalty.	
(*g*) Failure to set forth adequate description of work performed.	Minimum to maximum civil penalty.	
(*h*) Failure of mechanic to make log entries, records, or reports.	Moderate to maximum civil penalty.	
(*i*) Failure to sign or complete maintenance release.	Minimum to maximum civil penalty.	
(*j*) Inspection of work performed and approval for return to service by other than a qualified inspector.	Maximum civil penalty.	Up to 30 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*k*) Failure to have an adequate inspection system that produces satisfactory quality control.	Moderate civil penalty.	Up to 30 day suspension and thereafter until an adequate inspection system is attained.
(*l*) Maintaining or altering an article for which it is rated, without using required technical data, equipment, or facilities.	Moderate to maximum civil penalty.	Up to 30 day suspension.
(*m*) Failure to perform or properly perform maintenance, repairs, alterations, or required inspections.	Moderate to maximum civil penalty.	Up to 30 day suspension.
(*n*) Maintaining or altering an airframe, powerplant, propeller, instrument, radio, or accessory for which it is not rated.	Maximum civil penalty.	Suspension or revocation.
(*o*) Failure to report defects or unairworthy conditions to the Authority in a timely manner.	Moderate to maximum civil penalty.	
(*p*) Failure to satisfy housing and facility requirements.	Moderate civil penalty.	Suspension until housing and facility requirements are satisfied.
(*q*) Change of location, housing, or facilities without advance written approval.	Moderate civil penalty.	Suspension until approval is given.
(*r*) Operating as a certificated repair station without a repair station certificate.	Maximum civil penalty.	
(*s*) Failure to permit Authority to inspect.	Maximum civil penalty.	Indefinite suspension until Authority is permitted to inspect.
3. Aviation Maintenance Organization : Maintenance Engineers. (*a*) Improper performance of maintenance.	Moderate to maximum civil penalty.	
(*b*) Carrying out maintenance without current manuals.	Moderate to maximum civil penalty.	
(*c*) Failure to maintain recency of experience.	Moderate to maximum civil penalty.	
(*d*) Conducting maintenance without appropriate ratings.	Moderate to maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*e*) Unauthorized maintenance.	Moderate to maximum civil penalty.	
3. General aviation maintenance personnel.		
(*a*) Failure to revise aircraft data after major repairs or alterations.	Moderate to maximum civil penalty.	30 to 60 day suspension.
(*b*) Failure to perform or improper performance of maintenance.	Moderate to maximum civil penalty.	30 to 120 day suspension.
(*c*) Failure of mechanic to properly accomplish inspection.	Moderate to maximum civil penalty.	30 to 60 day suspension.
(*d*) Failure of mechanic to record inspection.	Moderate to maximum civil penalty.	15 to 30 day suspension.
(*e*) Failure of Inspection Authorisation holder to properly accomplish inspection.	Moderate to maximum civil penalty.	60 suspension to revocation.
(*f*) Failure of Inspection Authorisation holder to record inspection.	Moderate to maximum civil penalty.	15 to 30 day suspension.
(*g*) Maintenance performed by person without a certificate.	Moderate to maximum civil penalty.	
(*h*) Maintenance performed by person who exceeded certificate limitations.	Moderate to maximum civil penalty.	15 to 60 day suspension.
(*i*) Improper approval for return to service.	Moderate to maximum civil penalty.	30 to 120 day suspension.
(*j*) Failure to make maintenance record entries.	Moderate to maximum civil penalty.	30 to 60 day suspension.
(*k*) Failure to set forth adequate description of work performed.	Moderate to maximum civil penalty.	15 to 30 day suspension.
(*l*) Falsification of maintenance records.	Moderate to maximum civil penalty.	Revocation
4. Student operations.		
(*a*) Carrying passengers.		Revocation.
(*b*) Solo flight without endorsement.		45 to 90 day suspension.
(*c*) Operation on international flight.		60 to 90 day suspension.
(*d*) Use of aircraft in business.		30 to 120 day suspension.
(*e*) Operation for compensation or hire.		Revocation

Violation	*Recommended Sanction per Violation*	*Certificate Action*
5. Instructors for licences, ratings, authorisations and endorsement. (*a*) False endorsement of a student licence, rating, authorisation, or record.		Revocation.
(*b*) Exceeding flight time limitations or other training time limitations.		30 to 90 day suspension.
(*c*) Instruction in aircraft, and/or course for which he/she is not rated.		60 to 180 day suspension.
6. Operational Violations. (*a*) Operation without valid airworthiness or registration certificate.		30 to 90 day suspension.
(*b*) Failure to close flight plan or file arrival notice.	Administrative action to minimum civil penalty.	
(*c*) Operation without valid pilot licence (no licence issued).	Maximum civil penalty.	
(*d*) Operation while pilot licence is suspended.		Emergency revocation.
(*e*) Operation without pilot or medical certificate in personal possession.	Minimum civil penalty	
(*f*) Operation without valid medical certificate (no medical certificate issued).		Revocation.
(*g*) Operation for compensation or hire without commercial pilot certificate.		90 day suspension to revocation.
(*h*) Operation without type or class rating.		60 to 120 day suspension.
(*i*) Failure to comply with special conditions of medical certificate.		90 day suspension to revocation.
(*j*) Operation with known physical deficiency.		90 day suspension to revocation.
(*k*) Failure to obtain preflight information.		30 to 90 day suspension.
(*l*) Deviation from ATC instruction or clearance.		30 to 90 day suspension.
(*m*) Taxiing, takeoff, or landing without a clearance where ATC tower is in open.		30 to 90 day suspension.
(*n*) Failure to maintain radio communications in airport traffic area.		30 to 60 day suspension.
(*o*) Failure to comply with airport traffic pattern.		30 to 60 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*p*) Operation in terminal control area without or contrary to a clearance.		60 to 90 day suspension.
(*q*) Failure to maintain altitude in airport traffic area.		30 to 60 day suspension.
(*r*) Exceeding speed limitations in traffic area.		30 to 60 day suspension.
(s) Operation of unairworthy aircraft.		30 to 180 day suspension.
(t) Failure to comply with Airworthiness directives.		30 to 180 day suspension.
(*u*) Operation without required instruments and/or equipment.		30 to 90 day suspension.
(*v*) Exceeding operating limitations.		30 to 90 day suspension.
(*w*) Operation within prohibited or restricted area, or within positive control area.		30 to 90 day suspension.
(*x*) Failure to adhere to right of way rules.		30 to 90 day suspension.
(*y*) Failure to comply with VFR cruising altitudes.		30 to 90 day suspension.
(*z*) Failure to maintain required minimum altitudes over structures, persons, or vehicles over :		
(*i*) Congested area ;		60 to 180 day suspension.
(*ii*) Sparsely populated area ;		30 to 120 day suspension.
(*aa*) Failure to maintain radio watch while under IFR .		30 to 60 day suspension.
(*bb*) Failure to report compulsory reporting points under IFR.		30 to 60 day suspension.
(*cc*) Failure to display position lights.		30 to 60 day suspension.
(*dd*) Failure to maintain proper altimeter settings.		30 to 60 day suspension
(*ee*)Weather operations :		
(*i*) Failure to comply with visibility minimums in controlled airspace.		60 to 180 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*ii*) Failure to comply with visibility minimums outside controlled airspace.		30 to 120 day suspension.
(*iii*) Failure to comply with distance from clouds requirements in controlled airspace.		60 to 180 day suspension.
(*iv*) Failure to comply with distance from clouds requirements outside of controlled airspace.		30 to 120 day suspension.
(*ff*) Failure to comply with IFR landing minimums.		45 to 180 day suspension.
(*gg*) Failure to comply with instrument approach procedures.		45 to 180 day suspension
(*hh*) Careless or reckless operations :		
(*i*) Fuel mismanagement/exhaustion.		30 to 150 day suspension.
(*ii*) Wheels up landing.		30 to 60 day suspension.
(*iii*) Short or long landing.		30 to 90 day suspension.
(*iv*) Landing on or taking off from closed runway.		30 to 60 day suspension.
(*v*) Landing on or taking off from ramps or other improper areas.		30 to 120 day suspension.
(*vi*) Taxiing collision.		30 to 90 day suspension.
(*vii*)Leaving aircraft unattended with motor running.		30 to 90 day suspension.
(*viii*) Propping aircraft without a qualified person at controls.		30 to 90 day suspension.
(*ix*) Unauthorised dropping of object from aircraft.		30 to 60 day suspension.
(*x*) Unauthorised towing.		30 to 60 day suspension.
(*xi*) Acrobatic flight on airway, over congested area, below minimum altitude, etc.		90 to 180 day suspension.
(*xii*) Taking off with insufficient fuel.		30 to 150 day suspension.
(*xiii*) Operating so as to cause a collision hazard.		60 to 180 day suspension.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*xiv*) Taxiing aircraft off runway, taxiway, or ramp.		
(*ii*) Passenger operations.		
(*i*) Operation without approved seat or berth and approved safety belt for each person on board the aircraft required to have them during takeoff, en route flight, and landing. (*ii*) Carrying passengers who are under the influence of drugs or alcohol.		30 to 60 day suspension. 60 to 120 day suspension.
(*iii*) Performing acrobatics when all passengers are not equipped with approved parachutes.		60 to 90 day suspension.
(*iv*) Use of unapproved parachute.		30 to 60 day suspension.
(*v*) Permitting unauthorized parachute jumping.		30 to 90 day suspension.
(*vi*) Carrying passenger(s) without required recent flight experience.		30 to 120 day suspension
7. ID Plate Violations (*a*) Part 4 : Improper removal, changing or placing of identification information on a product.		
(*i*) Inadvertent.	Minimum civil penalty.	
(*ii*) Intentional misrepresenting identity of product.	Maximum civil penalty .	Revocation.
(*b*) Part 4 : Improper removal or installation of identification place.		
(*i*) Inadvertent.	Minimum civil penalty.	
(*ii*) Intentional misrepresenting identity of product.	Maximum civil penalty .	Revocation.
8. Approved Training Organizations		
(*a*) Knowingly permitting school aircraft to be used for unlawful carriage of controlled substances or other illegal activities. (*b*) Refusal to permit inspection of facilities, equipment, personnel, records, or certificate by the Authority.	Maximum Civil.	Revocation. Indefinite suspension until Authority is permitted to inspect, up to revocation.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*c*) False advertising.	Moderate to maximum civil penalty.	
(*d*) Improper crediting to or graduation of student. (*i*) Inadvertent. (*ii*) Intentional. (*e*) Refusal to permit CAA test, check or examination of student.	Moderate to maximum civil penalty. Maximum civil penalty.	Revocation Indefinite suspension until Authority is permitted to test, check or examine, up to revocation.
(*f*) Unqualified or unauthorised instruction.	Moderate to maximum civil penalty.	
(*g*) Failure to establish or maintain training record.	Moderate to maximum civil penalty.	
(*h*) Failure to make proper entries in the aircraft logs.	Minimum to moderate civil penalty.	
(*i*) Failure to report defects, occurrences or incidents or other air worthy conditions in a timely manner.	Moderate to Minimum Civil Penalty.	
(*j*) Failure to carry checklist or operator's handbook	Minimum civil penalty.	
IV—Security and Safety Violations by Individuals		
1. Checked Baggage		
(*a*) Failure to declare unloaded firearm.	Criminal Referral.	
(*b*) Loaded firearm.	Criminal Referral.	
(*c*) Incendiary/explosive.	Criminal Referral.	
2. Non-passengers : No intent to board		
(*a*) Possession of firearm (unloaded, unloaded with ammunition accessible, or loaded) or other dangerous or deadly weapon (including stun guns) :		
(*i*) At screening point with no aggravating circumstances. (*ii*) At screening point with aggravating circumstances.	Criminal Referral. Criminal Referral.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*iii*) In sterile area with no aggravating circumstances.	Criminal Referral.	
(*iv*) In sterile area with aggravating circumstance.	Criminal Referral.	
(*b*) Possession of incendiary/explosive at screening point or in sterile area with no intent to board a flight.	Criminal Referral.	
(*c*) Artful concealment of firearm (loaded or unloaded), other dangerous or deadly weapon (including stun guns), or incendiary/explosive at screening point or in sterile area.	Criminal Referral.	
3. **Passengers : Intent to board**		
(*a*) Possession of dangerous or deadly weapon (including stun guns, mace, etc., but excluding firearms and incendiary/ explosives)that would be accessible in flight in air transportation :		
(*i*) At screening point with no aggravating circumstances.	Criminal Referral.	
(*ii*) At screening pint with aggravating circumstances.	Criminal Referral.	
(*iii*) In sterile area or aboard aircraft with no aggravating circumstances.	Criminal Referral.	
(*iv*) In sterile area or aboard aircraft with aggravating circumstances.	Criminal Referral.	
(*b*) Possession of firearm that would be accessible in flight in air transportation with firearm unloaded, without accessible ammunition :		
(*i*) At screening point with no aggravating circumstances.	Criminal Referral.	
(*ii*) At screening pint with aggravating circumstances.	Criminal Referral.	
(*iii*) In sterile area or aboard aircraft with no aggravating circumstances.	Criminal Referral.	
(*iv*) In sterile area or aboard aircraft with aggravating circumstances.	Criminal Referral	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(*c*) Possession of firearm that would be accessible in flight in air transportation with firearm loaded, or with accessible ammunition :		
(*i*) At screening point with no aggravating circumstances.	Criminal Referral.	
(*ii*) At screening pint with aggravating circumstances.	Criminal Referral.	
(*iii*) In sterile area or aboard aircraft with no aggravating circumstances.	Criminal Referral.	
(*iv*) In sterile area or aboard aircraft with aggravating circumstances.	Criminal Referral.	
(*d*) Artful concealment of dangerous or deadly weapon (including stun guns, but excluding firearms and incendiary/ explosives) at screen point, in sterile area, or aboard aircraft.	Criminal Referral.	
(*e*) Possession of incendiary/explosive at screening point, in sterile area, or aboard aircraft that would be accessible in flight in air transportation.	Criminal Referral.	
(*f*) Artful concealment of firearm or incendiary/ explosive at screening point, in sterile area, or aboard aircraft.	Criminal Referral.	
4. OTHER ACTS		
(*a*) Entering sterile area after failing to submit to screening- non-aggravated.	Criminal Referral.	
(*b*) Entering sterile area after failing to submit to screening –aggravated.	Criminal Referral.	
(*c*) Imparting or conveying false information concerning an attempt to do an act that would be a crime prohibited by The Civil Aviation Act 2006.	Criminal Referral.	
(*d*) Threatening overt act or other intent to use or dangerously display firearm, incendiary/explosive, or other deadly or dangerous weapon (including stun guns).	Criminal Referral.	
(*e*) Violation of Sections 56 & 57 of the Civil Aviation Act 2006.	Criminal Referral.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
5. UNRULY PASSENGERS (*a*) Interference with crewmember.	Criminal Referral.	
(*b*) Physical assault or threat to physically assault a flight or cabin crewmember.	Criminal Referral.	
(*c*) Physical assault or threat to physically assault an individual other than a crewmember.	Criminal Referral.	
(*d*) Acts in a manner that poses imminent threat to safety of aircraft or other individuals on aircraft.	Criminal Referral.	
(*e*) Smoking while "No Smoking' sign is lighted.	Criminal Referral.	
(*f*) Smoking in aircraft lavatory.	Criminal Referral.	
(*g*) Tampering with smoke detector.	Criminal Referral.	
(*h*) Refusal to fasten seat belt while seat belt sign is lighted.	Criminal Referral.	
(*i*) Refusal to occupy an approved seat or berth with a safety belt, and, if installed, shoulder harness properly secured during movement on the surface takeoff, or landing.	Criminal Referral.	
(*j*) Operating a portable electronic device in violation of crew directives.	Criminal Referral.	
(*k*) Drinking alcoholic beverages not served by operator.	Criminal Referral.	
6. SPECIAL EMPHASIS ENFORCEMENT—**Individuals Aiming Laser Beam at Aircraft.**		
(*a*) Single, first-time, inadvertent or non-deliberate violation by individual.	Criminal Referral.	
(*b*) Deliberate violation by an individual not holding an airman certificate. (*c*) Deliberate violation by an airman certificate holder, regardless of whether airman was exercising the privileges of his or her certificate at the time of the violation.	Criminal Referral. Maximum civil penalty.	 Revocation (in addition to civil penalty)

Violation	*Recommended Sanction per Violation*	*Certificate Action*
7. FALSIFICATION (*a*) Intentional false or fraudulent entry, reproduction, or alteration on an application or a licence or certificate or rating or approval.		Revocation of authorised certificates.
8. MISCELLANEOUS (*a*) Carriage of illegal substances on aircraft.		Revocation.
(*b*) Conducting operation without required operating certificate.		60 to 120 day suspension.
(*c*) Misuse of an aerodrome-approved identification medium.	Minimum to moderate civil penalty	
(*i*) Making an incorrect statement on an application for a personnel licence or medical certificate.		Indefinite suspension (pending correction of application and determination of qualification) or revocation of personnel licence or medical certificate.
(*ii*) Refusal to produce personal licence and/ or associated medical certificate.		30 day suspension, and until produced to revocation.
9. **AVSEC VIOLATIONS**		
(1) Failure to carry out AVSEC functions or tasks other than screening to the standard specified in the national civil aviation security programme.	Moderate to Maximum civil penalty and possible criminal referral.	
(2) Failure to obtain written approval of the Authority on the revised security measures before carrying out any renovation, expansion or construction works at any aerodrome.	Moderate to Maximum civil penalty	
(3) Failure to establish an Aerodrome Security Committee that meets the requirement of the Aerodrome Security Programme.	Minimum to Moderate civil penalty.	
(4) Failure to provide aviation security officer and aviation screening officers in sufficient number..	Moderate to Maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(5) Consumption or evidence of consumption of alcoholic beverages or other prohibited substances while on duty.	Moderate to Max civil penalty.	
(6) Failure to wear uniform and display a badge or other authorized means of identification while on duty.	Minimum to Moderate civil penalty.	
(7) Carrying out aviation security duties without the minimum required training.	Maximum civil penalty.	
(8) Failure to provide initial and recurrent training on aviation security to aviation security officer and aviation security screening officer.	Moderate to Maximum civil penalty.	
(9) Failure to carry out initial and periodic background checks on aviation security officer and aviation security screening officer.	Maximum civil penalty.	
(10) Failure to keep accurate record of the background check and training of an aviation security officer and aviation security screening officer.	Minimum civil penalty.	
(11) Circumventing screening or assisting circumvention of screening of persons, goods or things in their possession or a vehicle under their care or control.	Maximum civil penalty.	
(12) False declaration of prohibited items that could be used to jeopardize the security of civil aviation.	Maximum civil penalty and possible criminal referral.	
(13) Falsification or alteration of any record or report to show compliance.	Maximum civil penalty and possible criminal referral.	
(14) Implementing amended security programme without approval.	Maximum civil penalty.	
(15) Access to restricted areas without appropriate permit (persons and vehicles).	Maximum civil penalty.	
(16) Failure of an aerodrome operator to notify facility operator or tenant restricted area operator of any threat against his facility.	Moderate to Maximum civil penalty.	
(17) Failure of a screening officer to notify aerodrome operator of any threat against the aerodrome.	Moderate to Maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(18) Failure to notify the Authority on the discovery of a weapon, explosive substance, an incendiary device or bomb explosion at the aerodrome.	Minimum civil penalty.	
(19) Failure to notify the Authority of a specific threat against the aerodrome.	Minimum civil penalty.	
(20) Failure to maintain a copy of AOSP or the pertinent portions of the AOSP at each aerodrome.	Minimum civil penalty.	
(21) Failure to assign qualified and trained person as a Ground Security Coordinator.	Maximum civil penalty.	
(22) Carriage of weapons on an aircraft by unauthorized person.	Maximum civil penalty.	
(23) Failure to declare authorized firearms.	Maximum civil penalty.	
(24) Carriage of declared firearms in an unlocked checked baggage/container.	Moderate civil penalty.	
(25) Failure to comply with X-ray operator duty time requirement.	Minimum to Moderate civil penalty.	
(26) Failure to notify the Authority of an act or suspected act of unlawful interference committed within an aerodrome.	Maximum civil penalty .	
(27) Failure of an aircraft operator to notify aerodrome operator, tenant restricted area operator or appropriate police of any threat against his facility.	Maximum civil penalty .	
(28) Failure of a screening officer to notify aircraft operator, aerodrome operator, the Nigeria Police and the Authority of any prohibited items detected at a restricted area.	Maximum civil penalty.	
(29) Failure of a screening officer to notify aircraft operator, aerodrome operator, the Nigeria Police and the Authority when a loaded firearm, explosive substance or incendiary device is detected in checked baggage.	Moderate to Maximum civil penalty.	
(30) Unavailability of restraining devices on board an aircraft.	Moderate civil penalty.	
(31) Use of a person as security coordinator without the minimum required security training.	Maximum civil penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(32) Use of a person as crew member on any domestic or international flight without the minimum required security training.	Minimum civil penalty.	
(33) Use of persons not qualified to perform screening functions.	Maximum civil penalty.	
(34) Acceptance of consignments of cargo, courier and express parcels or mail for carriage on flights without being subjected to security controls.	Maximum civil penalty.	
(35) Acceptance of catering supplies and stores without proper documentation and seal, and catering supplies that have been tempered with.	Minimum to Moderate civil penalty.	
(36) Acceptance of catering supplies and stores from unapproved flight catering operator.	Maximum civil penalty.	
(37) Failure to respond to Corrective Action Plans (CAPs) within specified time frame.	Minimum civil penalty.	
(38) Failure to implement Corrective Action Plans (CAPs) within specified time frame.	Maximum civil penalty.	
(39) Failure to comply with the security directives issued by the Authority.	Maximum civil penalty.	
(40) Unlawful carriage of a prohibited item at an airport, security restricted area, on board an aircraft or airport navigation installation.	Maximum civil penalty.	
(41) False declaration of the possession of a prohibited item that could be used to jeopardize the security of civil aviation.	Maximum civil penalty.	
(42) Aiding and abetting unauthorized access to aerodrome restricted area.	Maximum civil penalty.	
(43) Failure to carry out security screening of persons other than passengers, passengers, baggage, mail or cargo.	Maximum civil penalty and possible criminal referral.	
(44) Failure to implement approved security programme.	Moderate to Maximum civil penalty.	
(45) Failure to submit to security screening and forceful intrusion.	Maximum civil penalty.	
(46) Communication of false information with intent to jeopardize the security and safety of civil aviation.	Criminal referral/ ₦10,000,000 and life imprisonment.	

Violation	Recommended Sanction per Violation	Certificate Action
(47) Failure to make available relevant documents for inspection upon request by an authorized person.	Minimum to Moderate civil penalty.	
(48) Disclosure of sensitive security information to unauthorized person(s).	Moderate to Maximum civil penalty.	
(49) Obstruction of AVSEC personnel from carrying out lawful duties.	Maximum civil penalty.	
(50) Delay or failure in submission of documents requested by the Authority.	Minimum to moderate civil penalty.	
(51) Unruly passenger behaviour.	Criminal referral/ imprisonment of not less than two (2) months or both.	
(52) Operating without an approved security programme.	Maximum civil penalty.	
(53) Security company operating without necessary certificates, license, permit and approval.	Moderate civil penalty.	
(54) Failure to have or maintain an effective training programme.	Maximum civil penalty to suspension until compliance is demonstrated.	
(55) Failure to manage and control identification system.	Maximum civil penalty.	
(56) Failure to notify the Authority on change in modifications to operational particulars.	Minimum civil penalty.	
(57) Failure to keep at the aerodrome a current scale map of the aerodrome identifying the restricted areas.	Minimum civil penalty.	
(58) Usage of unapproved screening equipment.	Maximum civil penalty.	
(59) Attempted or unlawful seizure of aircraft.	Criminal Referral.	
(60) Conspiracy to attempt unlawful seizure of aircraft.	Criminal Referral.	
(61) Attempted or unlawful violence against a person, airport, airport facilities or an aircraft.	Criminal Referral.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(62) Release of Biological, Chemical or Nuclear (BCN) weapons or explosives, radioactive or similar substance in an aircraft.	Criminal Referral.	
(63) Illegal transportation of BCN weapons or explosives, radioactive or similar substance in an aircraft.	Criminal Referral.	
(64) Use of aircraft to cause death, damage to property or environment.	Criminal Referral.	
(65) Conspiracy to commit a violation of any of the aviation security regulations.	Criminal Referral.	
(66) Use of a device, substance or weapons to perform an act of violence on an aerodrome.	Criminal Referral.	
(67) Threat to commit an unlawful act of violence on an aerodrome.	Criminal Referral.	
(68) Breach of any AVSEC regulations or directives.	Criminal Referral.	
V. AIRCRAFT OWNER/OPERATOR REGISTRATION VIOLATIONS		
(*a*) Operation of an unregistered aircraft.		30 to 90 day suspension of pilot licence.
(*b*) Operation of an aircraft without an effective and valid Certificate of Aircraft Registration on board.	Minimum to maximum civil penalty only if operator is different from pilot.	30-90 day suspension of pilot certificate.
(*c*) Failure to return an ineffective or invalid Certificate of Aircraft Registration.	Minimum Civil Penalty.	Revoke Certificate of Aircraft Registration.
(*d*) Use of registered aircraft to carry out or facilitate unlawful activities.		Mandatory revocation of Certificate of Aircraft Registration and of all other Certificates of Aircraft Registration issued to its owner, and revocation of all personnel licences and medical certificate.

Violation	*Recommended Sanction per Violation*	*Certificate Action*
VI. All Individuals and Entities (*a*) Failure to surrender suspended or revoked licence, authorisation or other approval, or medical certificate.	*Individual* : Moderate civil penalty per day, *Entity* : Moderate civil penalty per day.	
VII. Consumer Protection Violations		
(1) Failure to provide assistance in case of denied boarding.	Minimum to moderate civil penalty plus payment of value of compensation prescribed in the regulation.	
(2) Failure to submit Boarding priority Rules to the Authority.	Minimum Civil Penalty.	
(3) Failure to comply with boarding priority rules when denying boarding.	Minimum to moderate Civil Penalty plus compensation prescribed in the Regulation.	
(4) Failure to give priority to persons with reduced mobility during boarding.	Minimum to moderate Civil Penalty.	
(5) Failure to render assistance in case of flight cancellation.	Moderate to maximum Civil Penalty.	
(6) Failure to provide care for persons with reduced mobility, persons accompanying them, unaccompanied minors, in case of denied boarding, flight cancellation and delays.	Moderate to maximum Civil Penalty plus monetary value of the prescribed care to be given to complainant.	
(7) Failure to display at check in counter passenger rights statement.	Minimum Civil Penalty.	
(8) Failure to provide to passengers on request, passenger rights leaflet.	Minimum to moderate Civil Penalty.	
(9) Misleading Advertising.	Moderate to maximum Civil Penalty plus seizure of all inappropriate excess gains/profit from the advert or promotional scheme. Possible criminal referrals.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(10) Failure to process ticket refund beyond stipulated time.	Refund of full value of ticket and an additional 5% of the ticket value.	
(11) Failure by any service provider to investigate complaint of passengers in respect of compensation and failure to respond to Authority's letter in respect of same.	Moderate Civil Penalty.	
(12) Failure or refusal to compensate passengers who are denied boarding involuntarily as a result of over booking.	Minimum Civil Penalty and compliance with the regulation.	
(13) Negligence in handling passenger baggage resulting in delay, damage or loss of baggage.	Moderate Civil Penalty and replacement of damaged baggage.	
(14) Over charging, discrimination in applying charges.	Maximum Civil Penalty for each day the violation continues.	
(15) Failure to respond to consumer letter of complaint duly issued by the Authority.	Minimum Civil Penalty.	
(16) Placing Advertisement without the Authority's written approval.	Minimum Civil Penalty.	
(17) Failure to maintain orderliness at check-in counters or boarding gates.	Minimum Civil Penalty.	
VIII. ECONOMIC REGULATION VIOLATIONS (1) Operation of sales outlet other than those approved by the Authority by foreign airlines.	Minimum Civil Penalty.	
(2) False declaration of information on airline operation for 5% TSC computation.	Maximum Civil Penalty and possible criminal referral.	
(3) Failure or refusal to maintain adequate insurance cover, failure to make quarterly returns on the adequacy of insurance cover.	Maximum Civil Penalty and possible criminal referrals of principal officers.	
(4) Violation of any condition of a license or approval by any company or allied aviation service provider.	Moderate Civil Penalty for initial violation and for each day the violation continues.	

Violation	Recommended Sanction per Violation	Certificate Action
(5) Failure or refusal to file fares, tariff, charges or give information thereof.	Moderate Civil Penalty for initial violation and minimum Civil Penalty for each day the violation continues.	
(6) Failure to comply with the conditions of approved flight clearance for non-scheduled international air service.	Minimum to moderate Civil Penalty.	
(7) Failure to obtain necessary Approvals. Permits or Clearances.	Maximum Civil Penalty.	
(8) Delay in remittance of 5%TSC.	Attracts a daily surcharge of 1% compound interest on the outstanding balance on the amount unremitted.	
(9) Engaging in Anti-Competitive Restrictive and concerted business practices under 18.15.2 and 18.15.3.	Cease and Desist Order and Restitution.	Possible withdrawal of operating authorization or certificate action.
(10) Failure to comply with the terms and conditions of an approved mode of operation.	Moderate to Maximum Civil Penalty.	Possible certificate action.
IX. Other Regulations Violations		
(1) Failure to obtain Aviation Height Clearance.	Moderate Civil Penalty.	
(2) Failure to maintain adequate fire and rescue services as approved by the Authority in Aerodrome.	Moderate Civil Penalty and.	Revocation of certificate if the violation continues.
(3) Failure to conform with approved Environmental protection programme.	Minimum to moderate Civil Penalty.	
(4) Failure to remove disabled aircraft.	₦10,000.00 for each day of the violation continues after demand is made.	
(5) Failure to install an approved wind direction and speed indicator(s).	Minimum to moderate Civil Penalty.	
(6) Failure to provide adequate weather information or meteorological services according to Authority's approved standards.	Maximum Civil Penalty with possible criminal referral of principal officers.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(7) Failure to comply with approved emergency procedure/plan.	Moderate Civil Penalty with possible criminal referral of principal officers.	
(8) Release of Biological, chemical or Nuclear (BCN) weapon or explosives, radioactive or similar substance in an aircraft.	Criminal Referral.	
(9) Illegal transportation of BNC weapon or explosives, radioactive or similar substance in an aircraft.	Criminal Referral.	
(10) Communication of false information with intent to endanger the safety of aircraft in flight.	Criminal Referral.	
(11) Transport of Dangerous Goods by Air without Approval.	Maximum Civil Penalty and or Criminal Referral.	
(12) Denial of Access to NCAA Inspectors to premises, documents, entries, aircraft, equipment or any other facilities where access is required.	Moderate to Maximum Civil Penalty.	
X. AERODROME VIOLATIONS		
(1) Commencing development of aerodrome, airstrip/heliport(onshore) without the Authority's approval.	Maximum Civil Penalty and suspension of work until approval granted.	
(2) Failure to inform the Authority of a developed heliport(onshore).	Maximum civil penalty and payment of construction fee.	
(3) Failure of an operator to obtain approval for documents enumerated in Nig.CARs Part 12.1.4.1(b) before commencement of aerodrome development.	Maximum civil penalty and cease and desist order.	
(4) Failure of an operator to submit aeronautical studies to the Authority for non-compliance with regulations.	Maximum Civil Penalty.	
(5) Failure of an operator to notify the Authority of any rehabilitation or upgrade of an/a aerodrome/heliport.	Maximum Civil Penalty.	
(6) Allowing aircraft operations into a heliport with expired heliport certificate.	Minimum Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(7) Failure of an operator to submit correct aeronautical data for publication into the AIP.	Minimum Civil Penalty.	
(8) Operating an aircraft into unapproved airstrip/heliport .	Maximum Civil Penalty.	
(9) Failure of an operator to renew a heliport certificate.	Maximum Civil Penalty.	Revocation of certificate.
(10) Failure of an aerodrome operator to restrict vehicle speed limit operating on the airside.	Minimum Civil Penalty.	
(11) Failure of Ground handling companies to comply with parking of GSE within the restricted areas allotted.	Minimum Civil Penalty.	
(12) Failure of an aerodrome/airstrip/heliport operator to implement approved training/ retraining programme for.	Minimum to maximum Civil Penalty.	Suspension.
(13) operational and maintenance personnel.		
(14) Failure to provide adequate training programme for operational and maintenance personnel for Authority's approval.	Minimum Civil Penalty.	
(15) Failure to establish and retain personnel training records.	Minimum Civil Penalty.	
(16) Failure of an/a aerodrome/airstrip/heliport operator to send mandatory report of an incident/ accident to the Authority.	Minimum Civil Penalty.	
(17) Failure of an aerodrome/airstrip/heliport operator to maintain or keep maintenance records for the Aerodrome/airstrip/heliport.	Maximum Civil Penalty.	Suspension
(18) Failure of an aerodrome/airstrip/heliport operator to comply with approved birds/ wildlife Management programme.	Moderate to maximum Civil Penalty.	
(19) Operating an aerodrome/airstrip/heliport without an approved operations manual.	Moderate Civil Penalty.	
(20) Failure of an aerodrome/airstrip/heliport operator to developed and submit work safety plan before construction/major maintenance of facilities.	Minimum to moderate Civil Penalty.	
(21) Failure to obtain Aviation height clearance.	Moderate Civil Penalty	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(22) Failure of an aerodrome/airstrip/heliport operator to renew aviation height clearance at the expiration of 12 calendar months.	Minimum to moderate Civil Penalty.	
(23) Provision of false information to the Authority in support of application for license, certificate or approval.	Maximum Civil Penalty and possible criminal referrals.	
(24) Failure or refusal of an aerodrome/airstrip/heliport to maintain adequate insurance cover.	Maximum Civil Penalty and possible criminal referral.	
(25) Establishing an unauthorized aerodrome.	Moderate Civil Penalty.	Closure of the aerodrome.
(26) Unauthorized use of aerodrome/airstrip/heliport.	Maximum Civil Penalty.	Suspension.
(27) Failure to obtain written approval of the authority.	Moderate to Maximum Civil Penalty.	
(28) to amend , upgrade, alter, transfer, sale or lease or alienate ownership of an existing aerodrome.		
(29) Failure to maintain adequate rescue and fire fighting services as approved by the authority.	Moderate Civil Penalty.	Revocation of aerodrome certificate If the violation continues after demand is made.
(30) Failure to remove disabled aircraft.	N10,000 for each day the violation continues after demand is made.	
(31) Failure to install an approved wind direction and speed indicator(s).	Minimum to moderate Civil Penalty.	
(32) Failure to comply with approved emergency procedure/plan.	Moderate Civil Penalty and possible Criminal referrals of principal Officers.	
(33) Failure to develop and/or implement an approved safety management system.	Moderate Civil Penalty.	
(34) Failure to calibrate any navigational and landing aids in accordance with approved standard.	Minimum to moderate Civil Penalty.	
(35) Failure to provide blast fences to protect personnel and vehicles from jet blast and propeller slipstreams.	Minimum to moderate Civil Penalty.	

Violation	Recommended Sanction per Violation	Certificate Action
(36) Failure to maintain standards on handling, storage and dispensing aviation fuel.	Minimum to moderate Civil Penalty.	
(37) Failure of an aerodrome operator to sweep, clean and/or de-grease apron regularly and when necessary.	Minimum to moderate Civil Penalty.	
(38) Failure to operate and maintain the aerodrome in accordance with approved procedures in the Aerodrome Operations Manual.	Moderate to maximum Civil Penalty.	
39) Failure to amend the aerodrome/airstrip/ heliport documents for maintenance of accuracy of information.	Minimum to moderate Civil Penalty.	
(40) Failure to NOTAM any obstruction, level of service or any safety concern conditions at an aerodrome.	Moderate to maximum Civil Penalty.	
(41) Failure to test the aerodrome emergency plan within the specified intervals.	Minimum to maximum Civil Penalty.	
(42) Failure to arrange and carryout internal audits of the safety management system within the specified time frame.	Minimum to moderate Civil Penalty.	
(43) Allowing night flights from, or at any aerodrome at which adequate facilities for night flights are lacking.	Moderate to maximum Civil Penalty.	
(44) Failure to provide adequate number of qualified and skilled personnel to perform all critical activities for aerodrome operation and maintenance.	Moderate to maximum Civil Penalty.	
(45) Failure to allow authorized person(s) access to any part of the aerodrome or any aerodrome facility, equipment, records, documents and operational personnel.	Moderate to maximum Civil Penalty.	
(46) Failure to implement a system of preventive maintenance and checking of the aerodrome facilities.	Minimum to Moderate Civil Penalty.	
(47) Failure to compile and retain monthly statistics in respect of the number of passengers and aircraft movements in determining fire category.	Minimum to Moderate Civil Penalty.	

Violation	Recommended Sanction per Violation	Certificate Action
(48) Failure to limit access to movement and safety areas only to ground vehicles and pedestrians necessary for Aerodrome and aircraft operations.	Minimum to Moderate Civil Penalty.	
(49) Failure to prepare and implement inspection programme.	Minimum to Moderate Civil Penalty.	
(50) Failure to implement a quality control programme.	Minimum to Moderate Civil Penalty.	
51) Failure of an aerodrome operator to provide standby fire cover during fuelling of aircraft.	Maximum Civil Penalty.	
(52) Failure of airline operator to make request for and obtain fire cover during fuelling operations.	Minimum Civil Penalty.	
(53) Failure of an aerodrome operator to ensure compliance with procedures including communication by a fuel vendor supplying fuel to aircraft at a place and in a manner approved by the aerodrome operator.	Maximum Civil Penalty.	
(54) Failure of an aerodrome operator to carry out the internal audit of fuel farms.	Maximum Civil Penalty.	
(55) Failure of an operator to submit and implement Corrective Action Plan (CAP) within agreed time frame for the Aerodrome/ Airstrip/Heliport.	Minimum Civil Penalty	
XI AIR TRAFFIC VIOLATIONS		
(1) Failure to carry out Air Traffic Management (ATM) duties as assigned.	Moderate to Maximum Civil Penalty and possible criminal referral.	
(2) Failure to obtain written approval of the Authority on the revised ATM procedures before carrying out any renovation, expansion or construction works at any ATM Facility.	Moderate to Maximum Civil Penalty.	
(3) Failure to establish an Aerodrome Security Committee that meets the requirement of the Aerodrome Security Programme.	Minimum to Moderate Civil Penalty.	
(4) Failure to provide qualified and competent Air Traffic Control Officers and in sufficient numbers.	Moderate to Maximum Civil Penalty.	

Violation		*Recommended Sanction per Violation*	*Certificate Action*
(5)	Consumption and evidence of alcoholic beverages or other prohibited substances while on duty.	Maximum Civil Penalty.	
(6)	Failure of an Air Traffic Control Officer to carry on his/her person a valid Air Traffic Control License while on duty.	Minimum to Moderate Civil Penalty.	
(7)	Carrying out Air Traffic Control functions without the minimum required training.	Maximum Civil Penalty.	
8)	Failure to provide initial and recurrent training on Air Traffic Control to Air Traffic Control Officers.	Moderate Civil Penalty.	
(9)	Failure to carry out initial and periodic assessments on Air Traffic Control Officers in order to maintain competence at the relevant ATM unit.	Moderate Civil Penalty.	
(10)	Failure to keep accurate record of initial and periodic assessments on Air Traffic Control Officers.	Moderate Civil Penalty.	
(11)	Obstruction of investigations/failure to provide information.	Moderate to maximum Civil Penalty and possible criminal referral.	
(12)	Failure to adhere to the provisions of an approved contingency plan/programme.	Moderate Civil Penalty and possible Criminal referral of Principal Officers.	
(13)	Falsification or alteration of any record or report to show compliance.	Maximum Civil Penalty and possible criminal referral.	
(14)	Implementing new ATM procedures without approval.	Maximum Civil Penalty.	
(15)	Operating as an ANSP without an approved ATM Operations Manual.	Moderate Civil Penalty.	
(16)	Failure to develop and submit a Work Plan during construction/maintenance of facilities at the aerodrome.	Minimum to moderate Civil Penalty.	
(17)	Failure of a duty Air Traffic Control Officer to notify his/her ANSP of any threat to civil aviation, ATM facility or the aerodrome.	Moderate to Maximum Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(18) Failure to render to an authorized officer required documents and forms for statistical verification.	Minimum Civil Penalty for each day the violation continues.	
(19) Failure of an ANSP to notify the Authority of a specific threat against any aerodrome.	Minimum Civil Penalty.	
(20) Failure to maintain a copy of ANSP certificate or the pertinent portions of the ANSP certificate at its Headquarters.	Minimum Civil Penalty.	
(21) Failure to assign a qualified and competent Air Traffic Control Officer as a Watch Supervisor.	Maximum Civil Penalty.	
(22) Failure to assign qualified and competent Air Traffic Control Officers as Quality Assurance Manager (QAM) and Air Traffic Operations Manager (ATOM) at each ATM facility.	Maximum Civil Penalty.	
(23) Other violations of these regulations not specifically listed above.	Minimum to maximum Civil Penalty.	
(24) Obstruction and prevention of the Authority or any of its designated officers from carrying out lawful duties.	Moderate to maximum Civil Penalty.	
(25) Failure to provide information upon request by the Authority.	Minimum to moderate Civil Penalty.	
(26) Provision of false information to the Authority in support of application for License, Certificate or Approval.	Maximum Civil Penalty and criminal referral.	
(27) Failure to respond to Corrective Action Plans (CAPs) within specified time frame.	Minimum Civil Penalty.	
(29) Failure to implement Corrective Action Plans (CAPs) within specified time frame.	Maximum Civil Penalty.	
(30) Failure to comply with the ATM directives issued by the Authority.	Maximum Civil Penalty.	
(31) Failure to make available relevant documents for inspection upon request.	Minimum to Moderate Civil Penalty.	
(32) Disclosure of sensitive information to unauthorized person(s).	Moderate to Maximum Civil Penalty.	
(33) Obstruction of ATM Inspectors from carrying out lawful duties.	Maximum Civil Penalty.	

Violation	Recommended Sanction per Violation	Certificate Action
(34) Delay or failure in submission of documents requested by the Authority.	Minimum to moderate Civil Penalty.	
(35) Operating without adherence to the approved Manuals of Standards for Air Traffic Management (ATM), PANS-OPS and Aeronautical Search and Rescue (SAR).	Maximum Civil Penalty.	
(36) Failure to have or maintain an effective training programme.	Maximum Civil Penalty.	Suspension until compliance is demonstrated.
(37) Failure to notify the Authority on change in modifications to operational procedures.	Minimum Civil Penalty.	
(38) Failure to adhere to the provisions of an approved SMS programme.	Maximum Civil Penalty.	
(39) False declaration of information on airline operations for 5% TSC computation.	Maximum penalty and possible criminal referral.	
(40) False declaration of document relating to statistical verification.	Maximum Civil Penalty and possible criminal referral.	Suspension of operating authorization
(41) Delay in the submission of document requested by the Authority.	Minimum Civil Penalty for each day the violation continues.	
(42) Violation of any condition of a License or Approval by any Company or allied Aviation Service Provider.	Moderate Civil Penalty for initial violation and each day the violation continues.	
(43) Failure or refusal by any Air Carrier or Service Provider to implement directives issued by the Authority on the protection of consumer interests.	Moderate Civil Penalty.	
(44) Failure to comply with the conditions of an approved flight clearance for non-scheduled or international air service.	Minimum to moderate Civil Penalty.	
(45) Failure to renew ANSP License within the stipulated time.	Minimum to moderate Civil Penalty.	
(46) Unauthorized use of ANSP facility.	Maximum Civil Penalty.	Suspension
(47) Failure to obtain written approval of the Authority to amend, upgrade, alter, transfer, sale or lease or alienate ownership of an existing ANSP facility.	Moderate to maximum Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(48) Reduction or extension of published level of service without approval.	Minimum Civil Penalty.	
(49) Failure to comply with safety directives issued by the Authority.	Maximum Civil Penalty.	
(50) Failure to conform with approved Environmental Protection Programme.	Minimum to moderate Civil Penalty.	
(51) Failure to install an approved wind direction and speed indicator(s).	Minimum to moderate Civil Penalty.	
(52) Failure to provide adequate weather information or Meteorological Services according to Authority's approved standards.	Maximum Civil Penalty and possible criminal referral of Principal Officers.	
(53) Failure to comply with approved emergency procedures/plan.	Moderate Civil Penalty and possible criminal referral of Principal Officers.	
(54) Failure to carry out maintenance of Aeronautical facilities as approved by the Authority.	Moderate Civil Penalty.	
(55) Failure to disseminate Aeronautical Information Services in accordance with approved procedures.	Minimum Civil Penalty and criminal referral of Officer-in-Charge.	
(56) Operation of aircraft into an aerodrome when weather is below the State Weather Minima.	Maximum Civil Penalty.	
(57) Failure to report the operation of aircraft into an aerodrome when weather is below the State Weather Minima.	Maximum Civil Penalty.	
(58) Failure to provide an approved standard of any type of Air Traffic Services.	Moderate Civil Penalty and criminal referral.	
59) Failure to calibrate any Navigational and Landing Aids in accordance with approved standards.	Minimum to moderate Civil Penalty.	
(60) Destruction or damage of Air Navigation Facilities.	Criminal Referral	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
XII. Aeronautical Information Services Violations		
(1) Obstruction of investigation/ failure to provide information.	Moderate to maximum Civil Penalty and possible criminal referral.	
(2) Operating an Aerodrome without an approved Aerodrome Operations Manual.	Moderate Civil Penalty.	
(3) Failure to develop and submit work plan during construction/maintenance of facilities at the Airport.	Minimum to moderate Civil Penalty.	
(4) Obstruction and prevention of the Authority or any of designated officers from carrying out lawful duties.	Moderate to maximum Civil Penalty.	
(5) Failure to provide information upon request by the Authority.	Minimum to moderate Civil Penalty.	
(6) Provision of false information to the Authority in support of application for licence, certificate or approval.	Maximum Civil Penalty and possible criminal referrals.	
(7) Failure to render to an authorized officer required documents, forms for statistical verification.	Minimum Civil Penalty each day the violation continues.	
(8) False declaration of documents relating to statistical verification.	Maximum Civil Penalty and possible criminal referral.	Suspension of Operating Authorization.
(9) Delay in submission of documents requested by the Authority.	Minimum Civil Penalty for each day the violation continues.	
(10) Establishing an unauthorized aerodrome.	Moderate Civil Penalty and closure of the aerodrome.	
(11) Unauthorized provision of allied aviation services.	moderate to Maximum Civil Penalty.	
(12) Failure to comply with the conditions of approved flight clearance for non-scheduled international air services.	Minimum to moderate Civil Penalty.	
(13) Failure to renew aerodrome licence within the stipulated time.	Minimum to moderate Civil Penalty.	
(14) Reduction of published level of service without approval.	Minimum Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(15) Failure to comply with safety directive issued by the Authority.	Maximum Civil Penalty.	
(16) Failure to comply with approved emergency procedure/plan.	Moderate Civil Penalty and possible criminal referral of principal officers.	
(17) Failure to develop or implement an approved Safety Management System.	Moderate Civil Penalty .	
(18) Failure to disseminate Aeronautical Information Services in accordance with approved procedure.	Minimum Civil Penalty and criminal referral of officer in charge.	
(19) Disclosure of unauthorized information.	Minimum Civil Penalty and criminal referral.	
(20) False information in order to obtain license, permit or any authorization.	Moderate Civil Penalty and criminal referral.	
(21) Failure to put in place Quality Management System in accordance with stipulated standards.	Medium Civil Penalty.	
(22) Failure to provide in timely manner, the personnel, facilities and financial resources need to implement and improve the processes of QMS and address customer on all AIS and charts related services.	Maximum Civil Penalty.	
(23) Failure to put in place a security plan to protect facility, personnel and services.	Moderate Civil Penalty.	
(24) Failure to put in place contingency plan in the invent of total or partial system failure.	Moderate Civil Penalty.	
(25) Failure to develop local operating procedure for the collection and dissemination of relevant data/ information in AIS Aerodrome units.	Moderate Civil Penalty.	
(26) Failure to carry out airport facilities and obstructions survey in WGS-84 datum which shall include geoidal undulations.	Moderate Civil Penalty.	
(27) Failure to depict on an aeronautical chart the values of magnetic variations at airport(s) nearest to the date of publication that is divisible by 5.	Moderate Civil Penalty.	
(28) Failure to produce aeronautical charts in accordance with required regulations.	Moderate Civil Penalty	

Violation	Recommended Sanction per Violation	Certificate Action
(29) Failure to provide requisite aeronautical chart including grid maps prior to aircraft operations at each aerodrome.	Moderate Civil Penalty.	
XIII—Communications Navigation and Surveillance Violations		
(1) Failure to officially involve NCAA (Air Navigation Services Inspectors) in the deployment of CNS facilities from Site validation/Factory Acceptance Test (FAT) to Installation stages.	Maximum Civil Penalty.	
(2) Assignment of Frequencies of Operation of Aeronautical Facilities without NCAA's Approval.	Maximum Civil Penalty.	
(3) Operation of Navigation and Landing facilities at the expiration of periodicity.	Maximum Civil Penalty.	
(4) Non-qualified ATSEP personnel rostered to man a watch without supervision.	Maximum Civil Penalty.	
5) An ATSEP carrying out maintenance on facilities he or she is not rated for.	Moderate Civil Penalty.	
(6) Operation of a safety-critical service which does not ensure the required standards (availability, continuity, efficiency etc.)	Maximum Civil Penalty.	
(7) Failure to inform NCAA prior to the procurement of any Aeronautical telecommunication equipment.	Moderate Civil Penalty.	
(8) before deployment to the aerodrome.		
(9) Failure to install or provide approved minimum air navigation facilities in the Aerodrome according to NCAA approved standards.	Moderate Civil Penalty.	
(10) Unlawful shutdown, downgrade or sudden termination of aeronautical Telecommunication equipment radiating signal in space to endanger or cause communication failure.	Maximum Civil Penalty.	
(11) Obstruction of an investigation or failure to provide information on sudden or willful shutdown of air navigation facilities that may have resulted in diversion or termination of flight.	Maximum Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(12) Failure to develop and submit work plan, progress reports during installation/major maintenance or overhaul of aeronautical telecommunication facility in the aerodrome.	Moderate Civil Penalty.	
(13) Obstruction and prevention of the authority or the Air Navigation Safety Inspector from carrying out lawful duties.	Maximum Civil Penalty.	
(14) Radiation of false signals due to negligence or failure to calibrate air navigation facilities in accordance with approved NCAA standards or for an intent to endanger safety of aircraft in flight.	Maximum Civil Penalty.	
(15) Establishing/alteration of radiated signal in space consequent upon unauthorized usage or change of assigned frequency or parameter contrary to established standards by the authority.	Moderate Civil Penalty and decommissioning of facility.	
(16) Failure to obtain a written approval of the authority to install/deploy, amend, upgrade or alter either by re-installation/ decommissioning of any aeronautical telecommunication facility in the aerodrome.	Moderate Civil Penalty.	
(17) Failure to carry out maintenance or calibration of any navigation and landing aids in accordance with approved standards by the authority.	Moderate Civil Penalty.	
(18) Destruction or damage of aeronautical telecommunication facilities for air navigation.	Repairing/replacement cost is negotiable with ANSP.	
(19) Failure to forward daily, weekly and monthly defect reports to the Authority.	Minimum Civil Penalty.	
(20) Failure to make appropriate entries into maintenance logbook in accordance with NCAA standards for documentation and entries.	Moderate Civil Penalty.	
(21) Failure to provide contingency plans to forestall any sudden disruption of radiation of signal or shutdown of aeronautical telecommunication facility.	Moderate Civil Penalty.	

Violation	*Recommended Sanction per Violation*	*Certificate Action*
(22) Failure to submit/implement Corrective Action Plan (CAP) within agreed time frame or remedy noncompliance after notification in writing by the Authority.	Moderate Civil Penalty.	
(24) Failure to renew an aeronautical Telecommunication service Provider certificate and continuous operation without certificate/permit.	Moderate Civil Penalty.	

IS 1.9. SI. Unit of Measurement

SI Unit of Measurement.

1. Table 2.1. SI. Unit Prefix

Multiplication factor			*Prefix*	*Symbol*
1 000 000 000 000 000 000	=	10^{18}	exa	E
1000 000 000 000 000	=	10^{15}	peta	P
1000 000 000 000	=	10^{12}	tera	T
1000 000 000	=	10^{9}	giga	G
1000 000	=	10^{6}	mega	M
1 000	=	10^{3}	kilo	k
100	=	10^{2}	hecto	H
10	=	10^{1}	deca	a
0.1	=	10^{-1}	deci	d
0.01	=	10^{-2}	centi	c
0.001	=	10^{-3}	milli	m
0.000 001	=	10^{-6}	micro	
0.000 000 001	=	10^{-9}	nano	n
0.000 000 000 001	=	10^{-12}	pico	p
0.000 000 000 000 001	=	10^{-15}	femto	f
0.000 000 000 000 000 001	=	10^{-18}	atto	a

2. Table 2.2.—NON-SI UNITS FOR USE WITH THE SI

Specific quantities In Table 3-4 Related to	*Unit*	*Symbol*	*Definition (in terms of SI units*
Mass	tonne	t	1 t = 10^3 kg
plane angle rad	degree	o	1^o = (0/180)
	minute	”	1’ = (1/60)0 = (0/10 800)
	rad second 000)rad	”	1” = (1/60)” = (0/648
temperature	degree Celsius	^oC	1 unit ^oC = 1 unit K[a])
time	minute	min	1 min = 60s
	=hour	h	1h = 60min = 3600s
	day	d	1d = 24h = 86400s
	week, month, year	—	
Volume	Litre	L	1L = 1 dm3 = $10^{-3}m^3$

(*a*) *See* Table 2.5 for conversion.

Specific quantities In Table 3-4 Related to	*Unit*	*Symbol*	*Definition (in terms of SI units*
Mass	tonne	t	1 t = 10^3 kg
Distance (long)	nautical mile	NM	1 NM = 1852 m
Distance	foot	ft	1 ft = 0.3048m
(vertical)[a]) Speed	knot	kt	1 kt = 0.514 444 m/s
			a) altitude, elevation, height, vertical speed

4. TABLE 2.4—STANDARD APPLICATION OF SPECIFIC UNITS OF MEASUREMENT

Ref. No.		*Primary Unit (Symbol)*	*Non-SI Alternative Units (Symbol)*	*Quantity*
1. DIRECTION/SPACE/TIME				
1.1.	altitude	m	ft	
1.2.	area	m^2		
1.3.	distance (long)[a)]	km	NM	
1.4.	distance (short)	m		
1.5.	elevation	m	ft	
1.6.	endurance	h and min		
1.7.	height	m	ft	
1.8.	latitude	ot”		
1.9.	length	m		
1.10.	longitude	o ‘ “		
1.11.	plane angle	o (when required, decimal subdivisions of the degree shall be used)		
1.12.	runway length	m		
1.13.	runway visual range	m		
1.14.	tank capacities (aircraft)[b)]	T		
1.15.	time	s min h d week month year		
1.16.	visibility[c)]	km		
1.17.	volume	m^3		
1.18.	wind direction	o (wind directions other than for a landing and take-off shall be expressed in degrees true ; for landing and take-off wind directions shall be expressed in degrees magnetic)		
2.1.	air density	kg/m^3		
2.2.	area density	kg/m^2		
2.3.	cargo capacity	kg		
2.4.	cargo density	kg/m^3		
2.5.	density (mass density)	kg/m^3		
2.6.	fuel capacity (gravimetric)	kg		
2.7.	gas density	kg/m^3		
2.8.	gross mass or payload	kg		
2.9.	hoisting provisions	kg		
2.10.	linear density	Wm		

4. TABLE 2.4—STANDARD APPLICATION OF SPECIFIC UNITS OF MEASUREMENT—(*continued*)

Ref. No.		*Primary Unit*	*Non-SI Alternative Units (Symbol)*	*Quantity (Symbol)*
2.	**MASS RELATED**			
2.11.	liquid density	kg/m^3		
2.12.	mass	kg		
2.13.	moment of inertia	kg*m2		
2.14.	moment of momentum	$kg.m^2/s$		
2.15.	momentum	kg.m/s		
3.	**FORCE-RELATED**			
3.1.	air pressure (general)	kPa		
3.2.	altimeter settin	hPa		
3.3.	gatmospheric pressure	hPa		
3.4.	bending moment	kN*m		
3.5.	force	N		
3.6.	fuel supply pressure	kPa		
3.7.	hydraulic pressure	kPa		
3.8.	modulus of elasticity	MPa		
3.9.	pressure	kPa		
3.10.	stress	MPa		
3.11.	surface tension	mN/m		
3.12.	thrust	kN		
3.13.	torque	N*m		
3.14.	vacuum	Pa		
4.	**MECHANICS**			
4.1.	airspeed[d)]	km/h		
4.2.	angular acceleration	rad/s2		
4.3.	angular velocity	rad/s^2		
4.4.	energy or work	J		
4.5.	equivalent shaft power	kW		
4.6.	frequency	HZ		
4.7.	ground speed	Km/h		
4.8.	impact	J/m^o		
4.9.	kinetic energy absorbed by brakes	MJ		

4. TABLE 2.4—STANDARD APPLICATION OF SPECIFIC UNITS OF MEASUREMENT—(*continued*)

Ref. No.		*Primary Unit*	*Non-SI Alternative Units (Symbol)*	*Quantity (Symbol)*
4.10.	linear acceleration	m/s2		
4.11.	power	kW		
4.12.	rate of trim	^{o}/S		
4.13.	shaft power	kW		
4.14.	velocity	m/s		
4.15.	vertical speed	m/s	Ft/min	
4.16.	wind speed	km/h	kt	
5.	**FLOW**			
5.1.	engine airflow			
5.2.	engine waterflow	kg/s		
5.3.	fuel consumption (specific)	kg/h		
	piston engines	kg/(kW^{o}h)		
	turbo-shaft engines	kg/(kW^{o}h)		
	jet engines	kg/(kN^{o}h)		
5.4	fuel flow	kg/h		
5.5	fuel tank filling rate (gravimetric)	kg/min		
5.6	gas flow	kg/s		
5.7	liquid flow (gravimetric)	g/s		
5.8	liquid flow (volumetric)	L/s		
5.9	mass flow	Kg/s		
5.10.	oil consumption			
	gas turbine	Kg/h		
	piston engines (specific)	g/(kW^{o}h)		
5.11.	oil flow	g/S		
5.12.	pump capacity	L/min		
5.13.	ventilation airflow	m^3/min		
5.14.	viscosity (dynamic)	Pa + s		
5.15.	viscosity (kinematic)	m2/s		
6.	**THERMODYNAMICS**			
6.1.	coefficient of heat transfer	W/(m2 . K)		
6.2.	heat flow per unit area	J/m2		
6.3.	heat flow rate	W		
6.4.	humidity (absolute)	g/kg		
6.5.	coefficient of linear expansion	^{o}C-1		

4. TABLE 2.4—STANDARD APPLICATION OF SPECIFIC UNITS OF MEASUREMENT—(*continued*)

Ref. No.		*Primary Unit*	*Non-SI Alternative Units (Symbol)*	*Quantity (Symbol)*
6.6.	quantity of heat	J		
6.7.	temperature	^{o}C		
7.	**ELECTRICITY AND MAGNETISM**			
7.1.	capacitance	F		
7.2.	conductance	S		
7.3.	conductivity	S/m		
7.4.	current density	A/m2		
7.5.	electric current	A		
7.6.	electric field strength	C/m2		
7.7.	electric potential	V		
7.8.	electromotive force	V		
7.9.	magnetic field strength	A/m		
7.10.	magnetic flux	Wb		
7.11.	magnetic flux density	T		
7.12.	power	W		
7.13.	quantity of electricity	C		
7.14.	resistance	[]		
8.	**LIGHT AND RELATED ELECTROMAGNETIC RADIATIONS**			
8.1.	Illuminance	lx		
8.2.	luminance	cd/m2		
8.3.	luminous exitance	Mm2		
8.4.	luminous flux	lm		
8.5.	luminous intensity	cd		
8.6.	quantity of light	Im- s		
8.7.	radiant energy	1		
8.8.	wavelength	m		
9.	**ACOUSTICS**			
9.1.	frequency	Hz		
9.2.	mass density	kg/m^3		
9.3.	noise level	dB[e)]		
9.4.	period, periodic time	S		
9.5.	sound intensity	W/m2		
9.6.	sound power	W		
9.7.	sound pressure	Pa		

4. TABLE 2.4—STANDARD APPLICATION OF SPECIFIC UNITS OF MEASUREMENT—(*continued*)

Ref. No.		*Primary Unit*	*Non-SI Alternative Units (Symbol)*	*Quantity (Symbol)*
9.8.	sound level	D B[e)]		
9.9.	static pressure (instantaneous)	Pa		
9.10.	velocity of sound	m/S		
9.11.	volume velocity (instantaneous)	m^3/s		
9.12.	wavelength	m		
10.	**NUCLEAR PHYSICS AND IONIZING RADIATION**			
10.1.	absorbed dose	Gy		
10.2.	absorbed dose fate	Gyls		
10.3.	activity of radionuclides	Bq		
10.4.	dose equivalent	Sv		
10.5.	radiation exposure	C&z		
10.6	exposure rate	C/kg* s		

(*a*) As used in navigation, generally in excess of 4 000 m.

(*b*) Such as aircraft fuel, hydraulic fluids, water, oil and high pressure oxygen vessels.

(*c*) Visibility of less than 5 km may be given in m.

(*d*) Airspeed is sometimes reported in flight operations in terms of the ratio MACH number.

(*e*) The decibel (dB) is a ratio which may be used as a unit for expressing sound pressure level and sound power level. When used, the reference level must be specified.

TABLE 2.5 TEMPERATUR CONVERSION FORMULAE

To Convert from	*to*	*Use Formula*
Celsius temperature ($t^o{}_c$)	Kelvin temperature (t^k)	$t^k = t^o{}_c + 273.15$
Fahreheit temperature ($t^o{}_F$)	Celsius temperature ($t^o{}_c$)	$t^o{}_c = (t^o - 32)/1.8$
Fahreheit temperature (t^o)	Kelvin temperature (t^k)	$t^k = (t^o \quad +459.67)/1.8$
Kelvin temperature (t^K)	Celsius temperature (t^{oF})	$t^oF = t \ - 273.1^C$
Rankine temperature ($t^{o\ R}$)	Kelvin temperature (t^K)	$t^k = t^{oR} \ /1$

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NIGERIA CIVIL AVIATION REGUATIONS

PART 2—PERSONNEL LICENSING

INTRODUCTION

Part 2 addresses the licensing of personnel. Article 32 of the Chicago Convention requires Nigeria to issue certificates of competency and licences or validate such certificates or licenses issued by other Contracting States to the pilot of every Nigerian-registered aircraft and to other members of the operating crew of every Nigerian-registered aircraft engaged in international navigation. The licensing of personnel in accordance with international standards promotes safe and regular aircraft operations.

Part 2 of the Regulations presents detailed personnel licensing requirements that meet the standards contained in ICAO *Annex* 1 and other national licences. the licensing and rating requirements cover the following personnel: pilots, flight instructors, flight engineers, flight dispatchers, aircraft maintenance engineers, air traffic controllers, air traffic safety electronics personnel, cabin crewmembers, parachute riggers, aviation repair specialists, aeronautical station operators and designees.

Part 2 also addresses medical assessments of flight crew and air traffic controllers and licences not addressed in ICAO *Annex* 1, such as air traffic safety electronics personnel, cabin crewmembers, parachute riggers, aviation repair specialists, and designees.

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PART 2—PERSONNEL LICENSING

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NIGERIA CIVIL AVIATION REGULATIONS

PART 2—PERSONNEL LICENSING

2.1. General

2.1.1.1.—(*a*) This Part 2 Prescribes : Applicability.

(1) The requirements for issuing, renewal and re-issue of aviation personnel licences, ratings, authorisations and certificates ;

(2) The conditions under which those licences, ratings, authorisations and certificates are necessary ; and

(3) The privileges and limitations granted to the holders of those licences, ratings, authorisations and certificates.

2.1.1.2—(*a*) For the purpose of this Part 2, in addition to the Definitions set forth in Section 78 of the Civil Aviation Act 2006 and in Part 1 of the Regulations, and the following definitions shall apply : Definitions.

(1) *Accredited Medical Conclusion*—The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

(2) *Aeroplane*—A power driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(3) *Aircraft*—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(4) *Aircraft Avionics*— A term designating any electronic device- including its electrical part-for use in an aircraft, including radio, automatic flight control and instrument.

(5) *Aircraft-category*—Classification of aircraft according to specified basic characteristics, *e.g*. aeroplane, helicopter, glider, free balloon.

(6) *Aircraft Certificated for Single-Pilot Operation*—A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

(7) *Aircraft Certificated for Multi-Pilot Operation*—A type of aircraft which the state of design has determined, during the certification process, can be operated safely with a minimum crew of two pilots. During the certification process, the Authority may issue a certificate of airworthiness designating an aircraft for single-pilot operation based upon the Type Certificate issued by the state of design, but it also might require the same aircraft be operated by more than one pilot under certain conditions, such as use in air transportation.

(8) *Aircraft required to be operated with a Co-Pilot*—A type of aircraft that is required to be operated with a co-pilot, as specified in the flight manual or by the air operator certificate.

(9) *Aircraft-type of*—All aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

(10) Airman. This term refers to—

(*i*) Any individual who engages, as the person in command or as pilot, mechanic, or member of the crew, or who navigates an aircraft while the aircraft is underway ;

(*ii*) Any individual in charge of the inspection, maintenance, overhauling, or repair of aircraft, and any individual in charge of the inspection, maintenance, overhauling, or repair of aircraft, aircraft engines, propellers, or appliances ; or

(*iii*) Any individual who serves in the capacity of flight dispatcher.

(10) *Airmanship*—The consistent use of good judgment and well-developed knowledge, skills and attitudes to accomplish flight objectives.

(11) *Airship*—A power-driven lighter-than-air aircraft.

(12) *Approved Maintenance Organization*—An organization approved by a Contracting State, in accordance with the requirements of *Annex* 6, Part I, Chapter 8-Aeroplane Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by that State.

(13) *Approved Training*—Training conducted under special curricula and supervision approved by a Contracting State.

(14) *Approved Training Organization*—An organization approved by and operating under the supervision of a Contracting State in accordance with the requirements of *Annex* 1 to perform approved training.

(15) *Authorised Aviation Medical Examiner*—A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority to conduct medical examination of fitness of applicants for licences or ratings for which medical requirement are prescribed.

(16) *ATS Surveillance Service*—A term used to indicate a service provided directly by means of an ATS surveillance system.

(17) *ATS Surveillance System*—A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

(18) *Balloon*—A non-power-driven lighter-than-air aircraft.

(19) *Calendar Month*—A period of a month beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered month (as January 1 through January 31 in the Gregorian Calendar).

(20) *Calendar Year*—A period of a year beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered year (as January 1 through December 31 in the Gregorian calendar).

(21) *Certify as Airworthy* (*to*)—To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

(22) *Commercial Air Transport Operation*—An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

(23) *Competency*—A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

(24) *Competency Element*—An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

(25) *Competency Unit*—A discrete function consisting of a number of competency elements.

(26) *Complex Aeroplane*—An aeroplane that has retractable landing gear, flaps, and a controllable pitch propeller : or in the case of seaplane, flaps and a controllable pitch propeller.

(27) *Conversion*—Conversion is the action taken by state in issuing its own licence on the basis of a licence issued by another contracting state for use on aircraft registered in State.

(28) *Co-Pilot*—A licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

(29) *Credit*—Recognition of alternative means or prior qualifications.

(30) *Cross-Country*. A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

(31) *Dual Instruction Time*—Flight time during which a person is receiving flight instruction from a properly authorized pilot on board the aircraft.

(32) *Error*—An action or inaction by an operational person that leads to deviations from organizational or the operational person's intentions or expectations.

(33) *Error Management*—The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired states.

(34) *Examiner*—Any person designated by the Authority to act as a representative of the Authority in examining, inspecting, and testing persons and aircraft for the purpose of issuing licences, ratings and certificates.

(35) *Flight Crew Member*—A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

(36) *Flight Plan*—Specified information provided to air traffic services unit, relative to an intended flight or portion of a flight of an aircraft.

(37) *Flight Simulator Training Device*—Also known as synthetic flight trainer. Any one of the following three types of apparatus in which flight conditions are simulated on the ground ;

(38)(*i*) *Flight Simulator*—Provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated.

(*ii*) *Flight Procedures Trainer*—Provides a realistic flight deck environment, and simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class ;

(*iii*) *Basic Instrument Flight Trainer*—Equipped with appropriate instruments and simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

(39) *Flight Time-Aeroplanes*—The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

(40) *Flight Time–Helicopters*—The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

(41) *Glider*—A non-power-driven heavier–than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(42) *Glider Flight Time*—The total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it comes to rest at the end of the flight.

(43) *Helicopter*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

(44) *Human Performance*—Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

(45) *Instrument Flight Time*—Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

(46) *Instrument Ground Time*—Time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the Licensing Authority.

(47) *Instrument Time*—Instrument flight time or instrument ground time.

(48) *Licensing Authority*—The Authority designated by a Contracting State as responsible for the licensing of personnel.

(49) *Likely*—In the context of the medical provisions in Chapter 6, likely means with a probability of occurring that is unacceptable to the medical assessor.

(50) *Maintenance*—The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

(51) *Medical Assessment*—The evidence issued by a Contracting State that the licence holder meets specific requirements of medical fitness.

(52) *Medical Assessor*—A physician, appointed by the Licensing Authority, qualified and experienced in the practice of Aviation Medicine and competent in evaluating and assessing medical conditions of flight safety significance.

(53) *Medical Certificate*—The evidence issued by the Authority that the licence holder meets specific requirements of medical fitness. It is issued following an evaluation by the Licensing Authority of the report submitted by the designated Medical examiner who conducted the examination of the applicant for the licence.

(54) *Medical Examiner*—A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed.

(55) *Night*—The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority.

(56) *Performance Criteria*—Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.

(57) *Pilot* (*to*)—To manipulate the flight controls of an aircraft during flight time.

(58) *Pilot-In-Command*—The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

(59) *Pilot-In-Command Under Supervision*—Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to the Licensing Authority.

(60) *Powered-Lift*—A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

(61) *Problematic Use of Substances*—The use of one or more psychoactive substances by aviation personnel in a way that: (*a*) constitutes a direct hazard to the user or endangers the lives, health or welfare of others ; and/or (*b*) causes or worsens an occupational, social, mental or physical problem or disorder.

(62) *Psychoactive Substances*—Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psycho stimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

(63) *Quality System*—Documented organizational procedures and policies ; internal audit of those policies and procedures; management review and recommendation for quality improvement.

(64) *Rated Air Traffic Controller*—An air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

(65) *Rating*—An authorization entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

(66) *Re-issue of a Licence*, *Rating Authorization or Certificate*—The administrative action taken after a licence, rating, authorization or certificate has lapsed that re-issues the privileges of the licence, rating, authorization or certificate for a further specified period consequent upon the fulfillment of specified requirements.

(67) *Rendering* (*a Licence*) *Valid*—The action taken by a Contracting State, as an alternative to issuing its own licence, in accepting a licence issued by any other Contracting State as the equivalent of its own licence.

(68) *Renewal of Licence*, *Rating*, *Authorization or Certificate*—The administrative action taken within the period of validity of a licence, rating, authorization or certificate that allows the holder to continue to exercise the privileges of a licence, rating, authorization or certificate for a further specified period consequent upon the fulfilment of specified requirements.

(69) *Route Sector*—A flight comprising take-off, departure, cruise of not less than 15 minutes, arrival, approach and landing phases.

(70) *Safety Management System*—A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures.

(71) *Sign a Maintenance Release* (*to*)—To certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness, by issuing the maintenance release referred to in *Annex* 6.

(72) *Significant*—In the context of the medical provisions in Chapter 6, significant means to a degree or of a nature that is likely to jeopardize flight safety.

(73) *Solo Flight Time*—Flight time during which a student pilot is the sole occupant of an aircraft.

(74) *State Safety Programme* (*SSP*)—An integrated set of regulations and activities aimed at improving safety.

(75) *Synthetic flight Trainer*—*See* flight simulation training device.

(76) *Threat*—Events or errors that occur beyond the influence of an operational person, increase operational complexity and must be managed to maintain the margin of safety.

(77) *Threat Management*—The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

(78) *Undesired Aircraft State*—Occurs when the flight crew places the aircraft in a situation of unnecessary risk.

(79) *Validation*—The action taken by Nigeria as an alternative to issuing its own licence, in accepting a licence issued by another contracting state as the equivalent of its own licence for use on aircraft registered in Nigeria.

Abbreviations.

2.1.1.3.—(*a*) The Following Abbreviations are Used In Part 2 :

1.	A	—	Aeroplane.
2.	AAME	—	Authorised Aviation Medical Examiner.
3.	AIP	—	Aeronautical Information Publication.
4.	AME	—	Aircraft Maintenance Engineer.
5.	AR	—	Aircraft Repair Specialist.
6.	AS	—	Airship.
7.	ATCO	—	Air Traffic Controller (Note : abbreviation ICAO A446).
8.	ATPL	—	Airline Transport Pilot Licence.
9.	B	—	Balloon.
10.	CAT II	—	Category II.
11.	CAT III	—	Category III.
12.	CPL	—	Commercial Pilot Licence.
13.	CRM	—	Crew Resource Management.
14.	DAME	—	Designated Aircraft Maintenance Examiner.

15.	DFDE	—	Designated Flight Dispatcher Examiner.
16.	DFEE	—	Designated Flight Engineer Examiner.
17.	DMEE	—	Designated Maintenance Engineer Examiner.
18.	DPE	—	Designated Pilot Examiner.
19.	DPRE	—	Designated Parachute Rigger Examiner.
20.	FD	—	Flight Dispatcher.
21.	FE	—	Flight Engineer.
22.	FI	—	Flight Instructor.
23.	G	—	Glider.
24.	H	—	Helicopter.
25.	IA	—	Inspection Authorisation.
26.	ICAO	—	International Civil Aviation Organisation.
27.	IFR	—	Instrument Flight Rules.
28.	ILS	—	Instrument Landing System.
29.	MPA	—	Multi-pilot Aeroplane.
30.	MPH	—	Multi-pilot Helicopter.
31.	MCPL	—	Multi-crew Pilot Licence
32.	NOTAM	—	Notice to Airmen.
33.	PIC	—	Pilot-in-Command.
34.	PL	—	Powered-Lift.
35.	PPL	—	Private Pilot Licence.
36.	RT	—	Radiotelephony.
37.	SMS	—	Safety Management Systems.
38.	SSP	—	State Safety Programme.
39.	SPA	—	Single-pilot Aeroplane.
40.	SPH	—	Single-pilot Helicopter.
41.	VFR	—	Visual Flight Rules.

2.2. General requirements for Licences, Ratings, Authorisations, Certificates, Endorsements and Designations.

2.2.1. Issue, renewal, and re-issue of licences, ratings, authorisations, designations, and certificates.

2.2.1.1.—(*a*) The Authority may issue the following Licences under this Part to an Applicant who satisfactorily accomplishes the requirements in this Part for the Licence sought : Licences.

(1) Pilot Licences :

(*i*) *Private Pilot Licence*—aeroplane, helicopter, airship, powered-lift, balloon or glider categories ;

(*ii*) *Commercial Pilot Licence*-aeroplane, helicopter, airship, powered-lift, balloon or glider categories ;

(*iii*) *Multi-Crew Pilot licence* (*MPL*)-aeroplane category ;

(*iv*) *Airline Transport Pilot Licence* (*ATPL*)-aeroplane, helicopter or powered-lift categories ;

(2) Flight engineer licence.

(3) Flight dispatcher licence.

(4) Flight instructor licence.

(5) Ground instructor licence.

(6) Aircraft maintenance engineer licence.

(7) Aviation repair specialist licence.

(8) Parachute rigger licence.

(9) Air traffic controller licence.

(10) Aeronautical station operator licence.

(11) Air traffic safety electronics personnel licence.

(12) Cabin crew licence.

(13) Flight radio telephony operator's restricted licence.

Ratings.

2.2.1.2.—(*a*) The Authority may issue the following ratings to place on a Pilot Licence or Flight Instructor Licence when an applicant satisfactorily accomplishes the requirements in this Part for the Rating Sought :

(1) Category ratings in the following aircraft :

(*i*) Aeroplane.

(*ii*) Helicopter.

(*iii*) Glider.

(*iv*) Free Balloon.

(*v*) Airship.

(*vi*) Powered-lift.

(2) Class ratings in the following aircraft :

(*i*) Single-engine land – aeroplane ;

(*ii*) Single-engine sea – aeroplane ;

(*iii*) Multi-engine land – aeroplane ;

(*iv*) Multi-engine sea – aeroplane ;

(*v*) A class rating shall be issued for those helicopters and powered-lifts certificated for single-pilot operations and which have comparable handling, performance and other characteristics ;

(*vi*) Hot air-balloon ;

(*vii*) Gas-balloon;

(*viii*) Any rating considered necessary by the Authority.

(3) Type ratings in the following aircraft :

(*i*) Each type of aircraft certificated for operation with a minimum crew of at least two pilots ;

(*ii*) Each type of helicopter certificated for single-pilot except where a class rating has been established under (*a*)(2)(*v*) ;

(*iii*) Any aircraft considered necessary by the Authority.

(4) Instrument ratings in the following aircraft :

(*i*) Instrument—Aeroplane.

(*ii*) Instrument—Helicopter.

(*iii*)Instrument—Powered lift.

Note : The instrument rating is included in the CPL-Airship and the ATPL-Aeroplane and Powered-lift.

(5) Flight Instructor ratings :

(*i*) The appropriate aircraft category, class, instrument and/or type rating according to the instruction to be taught.

(6) The Authority may issue the following ratings to place on a ground instructor's licence when an applicant satisfactorily accomplished the requirements of this Part for the rating sought :

(*i*) Basic.

(*ii*) Advanced.

(*iii*) Instrument.

(*b*) The Authority may issue the following ratings to place on a flight engineer's licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought :

(1) Reciprocating engine powered.

(2) Turbo propeller powered.

(3) Turbojet powered.

(*c*) The Authority may issue the following ratings to place on an air traffic controller licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought :

(1) Aerodrome control rating.

(2) Approach control rating.

(3) Approach radar control rating.

(4) Approach precision radar control rating.

(5) Area control rating.

(6) Area radar control rating.

(*d*) The Authority may issue the following ratings to place on an aircraft maintenance engineer licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought :

(1) Airframe.

(2) Powerplant.

(3) Avionics.

(*e*) The Authority may issue ratings as appropriate to place on an aviation repair specialist licence.

(*f*) The Authority may issue the following ratings to place on a parachute rigger's licence when an applicant satisfactorily accomplished the requirements of this Part for the rating sought :

(1) Seat.

(2) Back.

(3) Chest.

(4) Lap.

(*g*) The Authority may issue ratings as appropriate to place on a flight dispatcher licence.

(*h*) The Authority may issue ratings as appropriate to place on an Air Traffic Safety Electronics Personnel licence.

(*i*) The Authority may issue ratings as appropriate to place on a Cabin Crew licence.

Authorisations.

2.2.1.3.—(*a*) The Authority may issue the following Authorisations when an applicant satisfactorily accomplishes the requirements in this Part for the Authorisation sought :

(1) Student pilot authorisation.

(2) Instructor authorisation for training in a flight simulation training device.

(*b*) The Authority may issue the following authorisations to place on a pilot licence when an applicant satisfactorily accomplishes the requirements in this Part for the authorisation sought :

(1) Category II pilot authorisation.

(2) Category III pilot authorisation.

(*c*) The Authority may issue the following authorisation to place on an AME licence when an applicant satisfactorily accomplishes the requirements in the Part for the authorisation sought :

(1) Inspection Authorisation.

Endorsements.

2.2.1.4.—(*a*) A Pilot may receive the following endorsements from an authorised instructor when he/she satisfactorily accomplishes the required training in this Part :

(1) Complex aeroplane endorsement.

(2) High performance aeroplane endorsement.

(3) High altitude aircraft endorsement.

(*b*) An airman may receive an English language proficiency endorsement from the Authority when he/she satisfactorily meets the requirements of this Part.

Certificates.

2.2.1.5.—(*a*) The Authority may issue the following medical certificates when an applicant satisfactorily accomplishes the requirements in this part for the medical certificate sought :

(1) Medical Certificate Class 1 for CPL, ATPL, and flight instructor ratings and for DPEs ;

(2) Medical Certificate Class 2 for student pilot authorisation, PPL and cabin crew licences ;

(3) Medical Certificate Class 3 for Air traffic controller licence.

(*b*) The Authority may issue the following certificates to pilots, AMEs and flight engineers holding a licence from another ICAO Contracting State.

(1) Validation certificates.

(*c*) The Authority may issue certificates of designation to representatives of the Director-General of the Authority as identified in 2.2.1.6 below.

Designation of Representatives of the Director General of Civil Aviation.

2.2.1.6.—(*a*) The Authority may issue the following designations to private persons to act on behalf of the Director General of the Authority, as specified in this Part :

(1) DPE ;

(2) DFEE ;

(3) DFDE ;

(4) DAME ;

(5) DPRE ;

(6) AAME ; or

(7) Other designees as may be determined by the Authority.

Validity of Licences, Ratings, Authorisations and Certificates.

2.2.1.7.—(*a*) The Authority will issue, renew or re-issue a licence, rating, authorisation, designation and/or Certificate when the applicant complies with the requirements of Part 2 and the procedures in IS. 2.2.1.

(*b*) Privileges.

(1) The holder of a licence, certificate, authorisation or designation shall not exercise privileges other than those granted by the licence, certificate, authorisation or designation.

(2)(*i*) The privileges granted by a licence, or by related ratings, may not be exercised unless the holder maintains competency and meets the requirements for recent experience of this Part.

(*ii*) The Authority shall establish maintenance of competency and recent experience requirements for pilot licences and ratings based on a systematic approach to accident prevention and shall include a risk assessment process and analysis of current operations, including accident and incident data of Nigeria.

(*c*) Maintenance of competency shall be indicated in the airman's personal licence or record (*e.g.* logbook).

(*d*) The maintenance of competency of flight crewmembers, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Part 8.

(*e*) The validity period of a licence is 5 years.

(*f*) Upon application of the licence holder, the Authority may renew a licence within the 5 years validity period after initial issue of a rating provided the ratings related to the licence and the medical certificate are valid.

(*g*) The validity period of the ratings, authorisations, certificates of validation and medical certificates and the renewal/re-issue conditions are indicated in the relevant Subparts of Part 2.

(*h*) Medical fitness. Applicants for the following licences and authorisations shall hold a medical certificate issued under this part in order for their licence or authorisation to be valid :

(1) Student pilot authorisation.

(2) Pilot licence.

(3) Flight engineer licence.

(4) Flight instructor rating.

(5) Designated pilot examiner (DPE).

(6) Designated flight engineer examiner.

(7) Air traffic controller licence.

(*i*) The Authority having issued a licence shall ensure that other Contracting States are enabled to be satisfied as to the validity of the licence.

Note 1—Flight crew members may, to the extent deemed feasible by the Authority, demonstrate their continuing competency in flight simulation training devices approved by the Authority.

Language Proficiency.

2.2.2.—(*a*)(*i*) Pilots, flight engineers, flight navigators, air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the English language used for radio telephony communications.

(*ii*) Flight engineers, and glider and free balloon pilots shall have the ability to speak and understand the English language used for radiotelephony communications.

(*iii*) Pilots, flight navigators required to use the radiotelephone aboard an aircraft, air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the English language used for radiotelephony communications to the level specified in the language proficiency requirements in IS 2.2.2.

(*b*) The airmen identified in item (*a*) above shall demonstrate the ability to speak and understand the language used for radiotelephony communications in the English language to at least the Operational Level (Level 4) with the aim to speak at the Expert Level (Level 6) as specified in the language proficiency requirements in IS 2.2.2. The Authority will endorse as appropriate the licence of an airmen identified in item (*a*) who has demonstrated the ability to speak and understand the language used for radiotelephony communications in the English language to at least the Operational Level (Level 4).

(*c*) The language proficiency of airmen identified in item (*a*) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level as follows :

(1) Those demonstrating language proficiency at the Operational Level (Level 4) shall be evaluated at intervals not greater than 3 years ;

(2) Those demonstrating language proficiency at the Extended Level (Level 5) shall be evaluated at intervals not greater than 6 years ; and

(3) Those demonstrating language proficiency at the Expert Level (Level 6) shall be exempt from further language evaluation.

(*d*) Implementing Standard IS 2.2.2 contains the detailed requirements for language proficiency.

2.2.3. CREDIT FOR MILITARY COMPETENCY

Credit for Military Pilots.

2.2.3.1.—(*a*) Pilot licences. Except for a rated military pilot or former military pilot who has been removed from flying status for lack of proficiency, or because of disciplinary action involving aircraft operations, a rated military pilot or former rated military pilot who meets the requirements of IS 2.2.3.1 may apply, on the basis of his or her military training, for :

(1) A CPL ;

(2) A rating in the category and class of aircraft for which that military pilot is qualified ;

(3) An instrument rating with the appropriate category rating for which that military pilot is qualified ; and

(4) A type rating, if appropriate.

(*b*) The testing required by a military pilot seeking a licence or rating is as follows :

(1) If the applicant has been on active flight status within the past 12 months of application ; pass a knowledge test on :

(*i*) Air law ;

(*ii*) Aeronautical weather codes ;

(*iii*) Flight performance and planning ; and

(*iv*) Human performance.

(2) If the applicant has not been on active flight status within the past 12 months of application, pass both a knowledge and skill test.

Credit for Military Parachute Rigars.

2.2.3.2.—(*a*) The Authority shall grant to an applicant for a senior parachute rigger licence that licence if he or she passes a knowledge test on the regulations of Subpart 2.10 and presents satisfactory documentary evidence that he or she—

(1) Is a member or Civilian Employee of an Armed Force of Nigeria, is a Civilian Employee of a regular Armed Force of a Foreign Country, or has, within the 12 months before he applies, been honourably discharged or released from any status covered by this paragraph ;

(2) Is serving, or has served within the 12 months before application, as a parachute rigger for such an armed force ; and

(3) Has the experience required by paragraph 2.10.1.4 of these regulations.

2.2.4. VALIDATION AND CONVERSION OF FOREIGN LICENCES, RATINGS, AUTHORISATIONS AND CERTIFICATES

Validation of Flight Crew Licences.

2.2.4.1.—(*a*) General requirements for validation.

(1) A person who holds a current and valid pilot licence issued by another Contracting State in accordance with ICAO *Annex* 1, may apply for a validation of such licence for use on aircraft registered in Nigeria.

(2) The applicant for the validation certificate shall present to the Authority the foreign licence and evidence of the experience required by presenting the record (e.g. logbook).

(3) The applicant for the validation certificate shall present to the Authority evidence that he/she holds either a current medical certificate issued under Part 2 or a current medical certificate issued by the Contracting State that issued the applicant's licence.

(*i*) The Authority may allow the applicant to use his/her foreign medical certificate with the validation certificate provided that the medical certification requirements on which the foreign medical certificate was issued meet the requirements of Part 2, relevant to the licence held.

(4) The applicant for the validation certificate shall present to the Authority evidence of language proficiency in English as specified in 2.2.2 or shall demonstrate to the Authority the language proficiency skills as specified in 2.2.2.

(*i*) The validation shall be limited for use on Nigeria registered aircraft for use within Nigeria if the pilot is not proficient in the English language, as required by 2.2.2.

(5) The Authority will verify the authenticity of the licence, ratings authorisations and the medical certificate with the state of licence issue prior to issuing the validation.

(6) The Authority will only validate ratings or authorisations on the foreign licence together with the validation of a licence.

(7) The Authority may issue a validation certificate which will be valid for one year, provided the foreign licence, ratings or authorisations and the medical certificate remains valid.

(*b*) Validation certificate with PPL privileges.

(1) In addition to the requirements in item (*a*) above, the applicant for the validation certificate with PPL privileges shall have a foreign licence with at least PPL privileges.

(*c*) Validation certificate with PPL/IR, CPL, CPL/IR, MPL, ATPL or FE privileges. In addition to the requirements in item (*a*) above, the applicant for a validation certificate for either a PPL/IR, CPL, CPL/IR, MPL, ATPL or FE privileges, shall have the relevant foreign licence and meet the following requirements :

(1) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority the knowledge relevant to the licence to be validated of :

(*i*) Air Law ; (*see* IS : 2.2.4.1 (*c*)(1)).

(2) the applicant for the validation certificate may be required to complete a skill test for the relevant licence and ratings that he or she wants to be validated relevant to the privileges of the licence held ; and

(3) Comply with the experience requirements set out in the table contained in IS : 2.2.4.1(*c*)(3).

Conversion of Flight-crew Licences.

2.2.4.2.—(*a*) Conversion of a foreign pilot licence for issuance of a PPL by Nigeria. A person who holds a current and valid pilot licence with at least PPL privileges issued by another Contracting State in accordance with ICAO *Annex* 1, may apply for a conversion and be issued with a PPL for use on aircraft registered in Nigeria provided the following requirements are met.

(1) The holder shall :

(*i*) Present to the Authority the foreign licence, evidence of experience required by presenting the record (e.g. logbook) and current medical certificate ;

(*ii*) Present to the Authority evidence of proficiency in English language as specified in 2.2.2 or shall demonstrate to the Authority the language proficiency skills as specified in 2.2.2 ;

(*iii*) Obtain a Class 2 medical certificate issued under this Part ;

(*iv*) Demonstrate to the satisfaction of the Authority the knowledge of Air Law ; and

(*v*) Complete a PPL skill test.

(2) The Authority will verify the authenticity of the licence, ratings, authorisations and the medical certificate with the state of licence issue prior to converting the licence.

(*b*) Conversion of PPL/IR, CPL, CPL/IR, MPL, ATPL and Flight Engineer licences, which have been validated in accordance with paragraph 2.2.4.1. The holder of a current and valid foreign PPL/IR, CPL, CPL/IR, MPL, ATPL or Flight Engineer licence issued by another Contracting State in accordance with ICAO *Annex* 1, and appropriate medical certificate, may apply for conversion to the appropriate licence and ratings issued by Nigeria provided the following requirements are met :

(1) The applicant is the holder of a current validation certificate issued under 2.2.4.1 ;

(2) The applicant has completed 200 flight hours in a Nigerian registered aircraft which are operated by an operator established in Nigeria exercising the privileges granted by the validation certificate ;

(3) The applicant for the conversion shall present to the Authority the foreign licence and evidence of the 200 flight hours by presenting the record (*e.g.* logbook) ; and

(4) The applicant shall hold or obtain a medical certificate issued under this Part, appropriate to the level of licence to be converted.

(5) Ratings listed on a person's foreign pilot licence that have been validated in accordance with paragraph 2.2.4.1, may be placed on that person's converted licence.

Validation of Flightcrew Licences by Reliance upon the Licensing System of Another Contracting State.

2.2.4.3.—(*a*) Notwithstanding paragraphs 2.2.4.1 and 2.2.4.2 the Authority may issue a validation certificate with the applicable ratings to the holder of a current and valid foreign licence and current medical certificate, provided :

(1) The licence is issued by another ICAO Contracting State ;

(2) The Authority is convinced that the licence has been issued on the basis of at least Part 2 ;

(3) There is an agreement between the Authority and the other Contracting State about recognition of licences and, if applicable, keeping the licences and ratings current and valid ; and

(4) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(*i*) Air law ;

(*b*) The applicant for the validation certificate shall present to the Authority the :

(1) Foreign licence and evidence of the currency of the licence by presenting the record (e.g. logbook).

(2) Medical certificate relevant to the licence to be validated, provided that the foreign medical certificate meets the requirements of Part 2.

(3) Evidence of language proficiency in English as specified in paragraph 2.2.2 or shall demonstrate to the Authority the language skills as specified in paragraph 2.2.2.

(*c*) The Authority will verify the authenticity of the licence, ratings, authorisations and the medical certificate with the State of Licence issue prior to issuing the validation.

(*d*) The Authority may issue a validation certificate which will be valid for one year, provided the foreign licence, ratings, authorisations and medical certificate remains valid.

(*e*) The IS 2.2.4.3 contains procedures for validation of flightcrew licences by reliance upon the licensing system of another ICAO Contracting State.

2.2.4.4.—(*a*) Notwithstanding paragraphs 2.2.4.1 and 2.2.4.2 the Authority may issue a licence with the applicable ratings to the holder of a current and valid foreign licence, provided :

Conversion of Flightcrew Licences by Reliance upon the Licensing System of Another Contracting State.

(1) The licence is issued by another ICAO Contracting State ;

(2) The Authority is convinced that the licence has been issued on the basis of at least Part 2 ; and

(3) There is an agreement between the Authority and the other Contracting State about recognition of licences.

(*b*) The applicant for the conversion shall present to the Authority the :

(1) Foreign licence and evidence of the currency of the licence by presenting the record (*e.g.* logbook) ;

(2) Medical certificate relevant to the licence if the medical certificate is to be converted or medical certificated issued under Part 2 relevant to the licence sought ; and

(3) Evidence of language proficiency in English as specified in paragraph 2.2.2 or shall demonstrate to the Authority the language skills as specified in paragraph 2.2.2.

(*c*) The applicant shall demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(1) Air law ;

(*d*) The Authority will verify the authenticity of the licence, ratings, authorisations and the medical certificate with the State of Licence issue prior to issuing the validation.

(*e*) The IS 2.2.4.4 contains procedures conversion of flightcrew licences by reliance upon the licensing system of another ICAO Contracting State.

2.2.4.5.—(*a*) The requirements stated in 2.2.4.1 shall not apply where Nigerian-registered aircraft are leased to, chartered by or interchanged by an operator of another Contracting State, provided that during the term of the lease the State of the Operator has accepted the responsibility for the personnel licencing responsibility pursuant to an agreement with Nigeria under Article 83 bis of the Chicago Convention.

Validation in Case of Leased, Chartered or Interchanged Aircraft.

Temporary Validation of Non-NigeriaN Pilot Licences Held by Manufacturer Pilots.

2.2.4.6.—(*a*) In circumstances where validation of a non-Nigerian pilot licence is needed to fulfil specific tasks of finite duration, the Authority may issue a temporary validation of such a licence for those tasks as described in this paragraph.

(*b*) Notwithstanding the requirements contained in Sections 2.2.4.1, 2.2.4.2, 2.2.4.3 or 2.2.4.4, the Authority may temporarily validate a licence issued by another ICAO Contracting State in accordance with the provisions of ICAO Annex 1, including an instructor rating or examiner authorisation issued by that State, provided that the holder of the licence shall :

(*c*) Possess an appropriate licence, medical certificate, type ratings and qualifications, to include instructor or examiner qualifications, valid in the State of licence issue for the duties proposed ;

(*d*) Demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(1) Air law ;

(2) Aeronautical weather codes ;

(3) Flight performance and planning ; and

(4) Human performance.

(*e*) Provide evidence of language proficiency in the English language as specified in paragraph 2.2.2 or shall demonstrate to the Authority the language skills as specified in paragraph 2.2.2.

(*f*) Be employed by an aircraft manufacturer or Approved Training Organisation located outside Nigeria performing training on behalf of an aircraft manufacturer ; and

(*g*) Be limited to performing flight instruction and testing for initial issue of type ratings, the supervision of initial line flying by the pilots of an operator in Nigeria, delivery or ferry flights, initial line flying, flight demonstrations or test flights.

(*h*) Whenever conducting or supervising line flying, the pilot shall also be required to meet the relevant requirements of Part 8.

(*i*) The Authority will verify the authenticity of the licence, ratings, authorisations and medical certificate with the State of licence issue prior to issuing the temporary validation.

(*j*) The duration of the temporary validation shall be for one year.

2.2.4.7.—(*a*) General requirements for validation.

Validation of Aircraft Maintenance engineer Licences.

(1) A person who holds a current and valid AME licence issued by another Contracting State in accordance with ICAO Annex 1, may apply for a validation of such licence for use on aircraft registered in Nigeria.

(2) The applicant for the validation certificate shall present to the Authority the foreign licence and evidence of the experience required by presenting the personal record.

(3) The applicant for the validation certificate shall demonstrate to the Authority evidence of proficiency in English language.

(4) The Authority will verify the authenticity of the licence, ratings authorisations with the state of licence issue prior to issuing the validation.

(5) The Authority will only validate ratings or authorisations on the foreign licence together with the validation of a licence.

(6) The Authority may issue a validation certificate which will be valid for one year, provided the foreign licence, ratings or authorisations remains valid.

(*b*) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(1) Air Law ;

(2) Applicable Airworthiness requirements governing certification and continuing airworthiness ; and

(3) Approved maintenance organisations and procedures.

(*c*) The applicant for the validation certificate may be required to complete a skill test for the relevant licence and ratings that he or she wants to be validated relevant to the privileges of the licence held ; and

(*d*) Have a minimum of four years AME experience.

2.2.4.8.—(*a*) General requirements for conversion. A person who holds a current and valid AME licence issued by another Contracting State in accordance with ICAO Annex 1, may apply for conversion of such licence for use on aircraft registered in Nigeria provided the following requirements are met :

Conversion of Aircraft Maintenance engineer Licences.

(1) The applicant for the conversion shall present to the Authority the foreign licence and evidence of the experience required by presenting the personal record.

(2) The applicant for the conversion shall demonstrate to the Authority evidence of proficiency in English language.

(3) Demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(*i*) Air Law ;

(*ii*) Applicable Airworthiness requirements governing certification and continuing airworthiness ;

(*iii*) Approved maintenance organisations and procedures ; and

(*iv*) Human Performance ;

(4) The applicant for the validation certificate may be required to complete a skill test for the relevant licence and ratings that he or she wants to be validated relevant to the privileges of the licence held ; and

(5) Have a minimum of four years AME experience.

(*i*) The Authority will verify the authenticity of the licence, ratings authorisations with the state of licence issue prior to issuing the converted licence.

(*ii*) The Authority will only convert ratings or authorisations on the foreign licence together with the conversion of a licence.

(*iii*) The validation will be for one year provided that the underlying foreign AME licence remains current and valid.

(*b*) Conversion of AME licences that have been validated in accordance with 2.2.4.7. The holder of a current and valid AME licence issued by another Contracting State in accordance with ICAO Annex 1 who has a validation in accordance with 2.2.4.7 and can show evidence of 12 months performing maintenance on aircraft registered in Nigeria may convert his/her AME licence with no further formality.

Validation of AME Licences by Reliance upon the Licensing System of Another Contracting State.

2.2.4.9.—(*a*) Notwithstanding paragraphs 2.2.4.7 and 2.2.4.8 the Authority may issue a validation certificate with the applicable ratings to the holder of a current and valid foreign AME, provided :

(1) The licence is issued by another ICAO Contracting State ;

(2) The Authority had determined that the licence has been issued on the basis of at least Part 2 ;

(3) There is an agreement between the Authority and the other Contracting State about recognition of licences and, if applicable, keeping the licences and ratings current and valid ; and

(4) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(*i*) Air law ;

(*ii*) Applicable Airworthiness requirements governing certification and continuing airworthiness ; and

(*iii*) Approved maintenance organisations and procedures.

(5) The applicant for the validation certificate shall present to the Authority the :

(*i*) Foreign licence and evidence of the currency of the licence by presenting the personal record.

(6) The applicant for the conversion shall demonstrate to the Authority evidence of proficiency in English language.

(*b*) The Authority will verify the authenticity of the licence, ratings, with the State of Licence issue prior to issuing the validation.

(*c*) The Authority may issue a validation certificate which will be valid for one year, provided the foreign licence, ratings, and authorisations remain valid.

(*d*) The IS 2.2.4.9 contains procedures for validation of AME licences by reliance upon the licensing system of another ICAO Contracting State.

Conversion of AME Licences by Reliance upon the Licensing System of Another Contracting State.

2.2.4.10.—(*a*) Notwithstanding paragraphs 2.2.4.7 and 2.2.4.8 of these regulations the Authority may issue a licence with the applicable ratings to the holder of a current and valid foreign licence, provided :

(1) The licence is issued by another ICAO Contracting State ;

(2) The Authority is convinced that the licence has been issued on the basis of at least Part 2 of these regulations ; and

(3) There is an agreement between the Authority and the other Contracting State about recognition of licences.

(*b*) The applicant for the conversion shall present to the Authority the :

(1) Foreign licence ; and

(2) Evidence of the currency of the licence by presenting the personal record (e.g. logbook).

(*c*) The applicant for the conversion shall demonstrate to the Authority evidence of proficiency in English language.

(*d*) The applicant shall demonstrate to the satisfaction of the Authority the knowledge of the following elements relevant to the licence to be validated :

(1) Air law ;

(2) Natural Science and aircraft general knowledge ;

(3) Aircraft Engineering ;

(4) Aircraft Maintenance ; and

(5)Human Factors.

(*e*) The Authority will verify the authenticity of the licence, ratings and authorisations with the State of Licence issue prior to issuing the validation.

(*f*) The IS 2.2.4.10 contains procedures conversion of AME licences by reliance upon the licensing system of another ICAO Contracting State.

Validation of Flight Dispatcher Licences.

2.2.4.11.—(*a*) General requirements for validation.

(1) A person who holds a current and valid Flight Dispatcher licence issued by another Contracting State in accordance with ICAO Annex 1, may apply for a validation of such licence for use on aircraft registered in Nigeria.

(2) The applicant for the validation certificate shall present to the Authority the foreign licence and evidence of the experience required by presenting the personal record.

(3) The applicant for the validation certificate shall demonstrate to the Authority evidence of proficiency in English language.

(4) The Authority will verify the authenticity of the licence, ratings authorisations with the state of licence issue prior to issuing the validation.

(5) The Authority will only validate ratings or authorisations on the foreign licence together with the validation of a licence

(6) The Authority may issue a validation certificate which will be valid for one year, provided the foreign licence, ratings or authorisations remains valid.

(*b*) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority by passing the knowledge test covering the following elements relevant to the licence to be validated :

(1) Air law ;

(2) Aeronautical weather codes ;

(3) Flight performance and planning ;

(4) Human performance ; and

(5) Any other knowledge area considered necessary by the Authority.

(*c*) The applicant for the validation certificate may be required to complete a skill test for the relevant licence and ratings that he or she wants to be validated relevant to the privileges of the licence held.

Conversion of Flight Dispatcher Licences.

2.2.4.12.—(*a*) General requirements for conversion. A person who holds a current and valid Flight Dispatcher licence issued by another Contracting State in accordance with ICAO Annex 1, may apply for conversion of such licence for use on aircraft registered in Nigeria provided the following requirements are met :

(1) The applicant for the conversion shall present to the Authority the foreign licence and evidence of the experience required by presenting the personal record.

(2) The applicant for the conversion shall demonstrate to the Authority evidence of proficiency in English language.

(3) Demonstrate to the satisfaction of the Authority by passing the knowledge covering the following elements relevant to the licence.

(*i*) Air Law ;

(*ii*) Aeronautical weather codes ;

(*iii*) Flight performance and planning ;

(*iv*) Human Performance ; and

(*v*) Any other knowledge area considered necessary by the Authority.

(4) The applicant may be required to complete a skill test for the relevant licence and ratings that he or she wants to be converted relevant to the privileges of the licence held ;

(5) The Authority will verify the authenticity of the licence, ratings authorisations with the state of licence issue prior to issuing the converted licence.

(6) The Authority will only convert ratings or authorisations on the foreign licence together with the conversion of a licence.

(7) Conversion of Flight Dispatcher licences that have been validated in accordance with 2.2.4.11. The holder of a current and valid Flight Dispatcher licence issued by another Contracting State in accordance with ICAO *Annex* 1 who has a validation in accordance with 2.2.4.11 and can show evidence of 12 months exercising the privileges of the validation certificate on aircraft registered in Nigeria may convert his/her Flight Dispacher licence with no further formality.

2.2.5. TRAINING AND TESTING REQUIREMENTS.

Documentation of Training and Aeronautical Experience.

2.2.5.1.—(*a*) Each person shall document and record the following in a manner acceptable to the Authority :

(1) Training and/or experience used to meet the requirements for a licence, rating, endorsement and/or authorisation of Part 2 of these Regulations ; and

(2) The experience required to show the maintaining of recency of aeronautical experience according to the requirements of Part 2 of these Regulations.

Training Conducted in an Approved Training Organisation.

2.2.5.2—(*a*) The Authority may provide for some reduction in the experience requirements or an alternate means of compliance with the experience requirements for the issue of certain licences and ratings prescribed in this Part when training is conducted within an Approved Training Organisation under special curricula approved by the Authority under Part 3.

(*b*)The Authority shall ensure that approved training shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training through the certification of Approved Training Organisations and by approval of curricula to be taught by Approved Training Organisations as contained in Part 3.

(*c*) Part 3 prescribes the requirements for certifying and administering Approved Training Organisations for conducting approved training.

Use of Flight Simulation Training Devices (Synthetic Flight Trainers).

2.2.5.3.—(*a*) Except as specified in paragraph (*b*) of this subsection, no airman may receive credit for use of any flight simulation training device for satisfying any training, testing, or checking requirement of this part unless that flight simulator or flight training device is approved by the Authority for—

(1) The training, testing, and checking for which it is used ;

(2) Each particular manoeuvre, procedure, or crewmember function performed ; and

(3) The representation of the specific category and class of aircraft, type of aircraft, particular variation within the type of aircraft, or set of aircraft for certain flight training devices.

(*b*) The flight simulation training device shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter, and heading reference) as those of the aircraft used by the operator.

(1) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.

(2) Operators that have standard instruments shall use simulators that have standard instruments.

(3) Operators shall not conduct differences training on variant training on aircraft that have electronic glass displays with aircraft that have standard instruments.

(*c*) The Authority may approve a device other than a flight simulation training device for specific purposes.

(*d*) The use of a synthetic flight trainer for performing training, testing and checking for which a flight crewmember is to receive credit, shall be approved by the Authority, which shall ensure that the synthetic flight trainer is appropriate to the task.

(*e*) The Authority shall not permit a person to carry out instruction on a flight simulation training device required for the issue of a pilot licence or rating unless such person holds or has held an appropriate licence or has appropriate flight training and flight experience and has received proper authorization from the Authority.

Knowledge and Skill Tests and Checks : Time, Place, Designated. Persons and Format.

2.2.5.4.—(*a*) Knowledge and Skill Tests and Checks prescribed by or under Part 2 are given at times and places, and by persons authorised and designated by the Authority.

(*b*) The knowledge test shall be performed in written or computer format, except for the knowledge test for an instructor rating or an additional instructor rating within the same aircraft category, which may be performed orally.

(*c*) In addition to the written knowledge test, candidates may be questioned orally during the skill test, as appropriate.

Knowledge and Skill Tests and Checks-Prerequi-sites, Passing Grades and Retesting After Failure.

2.2.5.5—(*a*) An applicant for a knowledge test or a skill test shall have received any required endorsement as specified in this Part for the applicable licence, rating or authorisation to show that the applicant has met the training and/or experience requirements to take the knowledge or skill test.

(*b*) An applicant for a knowledge or skill test shall receive written authorisation from the Authority to take, or retake, the test.

(*c*) An applicant shall show proper identification in the form of a Government issued identification document at the time of application that contains the applicant's :

(1) Photograph ;

(2) Signature ;

(3) Date of birth, which shows the applicant meets or will meet the age requirements of Part 2 for the licence sought before the expiration date of the airman knowledge test report ; and

(4) Actual residential address, if different from the applicant's mailing address.

(*d*) The Authority shall specify the minimum passing grades.

(*e*) An applicant shall, before attempting the skill test for a licence or rating :

(1) Have passed the required knowledge test within the 24 calendar-month period preceding the month the applicant successfully completes the skill test ; or

(2) If an applicant for an ATPL, have passed the ATP knowledge test within a period of 7 years before successfully completing the ATP skill test, provided that the applicant is, and has been continuously, employed as a flight crewmember by a certificate holder under Part 9 at the time of the ATP skill test.

(*f*) Retesting after failure of a test.

(1) An applicant for a knowledge or skill test who fails that test may reapply to retake the test only after the applicant has received :

(*i*) The necessary training from an authorised instructor who has determined that the applicant is proficient to pass the test ; and

(*ii*) An endorsement from an authorised instructor who gave the applicant the additional training.

(2) An applicant for a flight instructor licence with an aeroplane category rating or, for a flight instructor licence with a glider category rating, who has failed the skill test due to deficiencies in instructional proficiency on stall awareness, spin entry, spins, or spin recovery shall—

(*i*) Comply with the requirements of paragraph (*f*)(1) of this subsection before being retested ;

(*ii*) Bring an aircraft to the retest that is of the appropriate aircraft category for the rating sought and is certified for spins ; and

(*iii*) Demonstrate satisfactory instructional proficiency on stall awareness, spin entry, spins, and spin recovery to an examiner during the retest.

(*g*) Cheating or other unauthorised conduct.

(*a*) An applicant for a knowledge test may not :

(1) Copy or intentionally remove any knowledge test ;

(2) Give to another applicant or receive from another applicant any part or copy of a knowledge test ;

(3) Give assistance on , or receive assistance on a knowledge test during the period that test is being given ;

(4) Take any part of a knowledge test on behalf of another person ;

(5) Be represented by, or represent another person for a knowledge test ;

(6) Use any material or aid during the time the test is being given, unless specifically authorized to do so by the Authority ; and

(7) Intentionally cause, assist, or participate in any act prohibited by this paragraph.

(*b*) An applicant who the Authority finds has committed an act prohibited by paragraph (*a*) of this section is prohibited, for 1 year after the date of committing that act, from :

(1) Applying for any licence, rating, or authorization issued under part 2 of these Regulations ; and

(2) Applying for and taking any test under part 2 these Regulations ;

(3) Any licence or rating held by the applicant may be suspended or revoked if the Authority finds that person has committed an act prohibited by this section.

Reliance on Training and Testing in another Contracting State.

2.2.5.6.—(*a*) The Authority may rely on the training and/or testing system administered by another Contracting State as the basis for its own approved training curriculum, including the administration of written and/or skill test requirements for airman licences provided that the Authority has an agreement with the other Contracting State whose training and/or testing system is used.

(*b*) The applicant shall apply for and receive written approval from the Authority prior to receiving training and/or testing in a system administered by another Contracting State.

Instructor Requirements -General.

2.2.6.—(*a*) All applicants for instructor licences and ratings or authorisations shall, in addition to specific requirements contained in this Part, have received and logged training from an authorised instructor on the fundamentals of instructing and have passed a knowledge test on the following areas of instructing :

(1) Techniques of applied instruction ;

(2) Assessment of student performance in those subjects in which ground instruction is given ;

(3) The learning process ;

(4) Elements of effective teaching ;

(5) Student evaluation and testing, training philosophies ;

(6) Training programme development ;

(7) Lesson planning ;

(8) Classroom instructional techniques ;

(9) Use of training aids, including flight simulation training devices as appropriate ;

(10) Analysis and correction of student errors ;

(11) Human performance relevant to flight instruction ;

(12) Hazards involved in simulating system failures and malfunctions in the aircraft ; and

(13) Principles of threat and error management.

(*b*) The following applicants do not need to comply with paragraph (*a*) of this subsection–

(1) The holder of an instructor licence or authorisation issued under this part who has already passed the knowledge test in the areas of instructing ;

(2) The holder of a current teacher's certificate issued by a national or local authority that authorises the person to teach at a secondary educational level or higher ; or

(3) A person who provides evidence of an equivalent level of experience acceptable to the Authority.

2.2.7.—(*a*) The Authority may designate private individuals to act as representatives of the Director General of the Authority in examining, inspecting, and testing persons and aircraft for the purpose of issuing airmen and aircraft licences, ratings and certificates.

Designated Examiners.

(*b*) The specific requirements for each type of designated examiner are contained in the appropriate licensing section of Part 2 related to the licensing requirements of the persons to be examined.

(*c*) The Authority will issue each designated examiner a certificate of designated authority and a designee identification card specifying the kinds of designation for which the individual is qualified and the duration of the designation.

2.2.8.—(*a*) The licence shall be made of a suitable material as listed in ICAO *Annex* 1 : 5.1.2.

Specifications and Format of the Licence.

(*b*) The licence format shall be in a form and manner prescribed by the Authority.

(*c*) The items required on the licence are indicated in IS 2.2.8.

(*d*) The licence shall contain the expiration date of the licence and ratings.

(*e*) The licence shall be issued in the English language.

2.2.9. SUSPENSION OR REVOCATION OF A LICENCE, RATING, AUTHORISATION OR CERTIFICATE.

2.2.9.1.—(*a*) If, in accordance with the Civil Aviation Act 2006 the Authority determines that the interests of safety require that a license, rating, authorisation or certificate must be suspended, the Authority may act as follows :

Suspension of a Licence, Rating Authorisation or Validation Certificate

(1) If the Authority discovers facts indicating either a lack of competency or lack of qualification, the Authority may, require an applicant for or the holder of any license, rating, authorisation, or validation certificate to retake all or part of the knowledge or practical tests required for any license, rating, authorisation, or validation certificate at issue, renewal or re-issue. The Authority may suspend the validity of any such license, rating, authorisation and/or validation certificate pending the results of such re-testing.

(2) A person whose license, rating, authorisation, or certificate has been amended, modified, suspended, or revoked shall be provided with notice and an opportunity to be heard in accordance with Part 1 : 1.3.

(3) After notifying the person involved, in writing, stating the reasons for such action, the Authority may also suspend the validity of any license, rating, authorisation and/or validation certificate in the following cases :

(*i*) During the investigation of an aircraft disaster or incident ;

(*ii*) In cases of proven misconduct, recklessness or excessive carelessness ;

(*iii*)If the holder has acted in contradiction to his or her privileges ; and/or

(*iv*) Pending the investigation of a suspected violation of these regulations or the aviation law under which these regulations are affected.

(4) Once the suspension is effective, the person involved shall immediately cease exercising the privileges of the affected license, certificate, rating, or authorisation. The person involved shall surrender to the Authority all licenses or validation certificates in his or her possession that are subject to the suspension within 8 days of receiving the notification of the order. If the person fails to surrender the documents under suspension, the Authority may revoke all such certificate(s) held by that person.

(5) When a suspension is limited to one or more ratings mentioned on the license or validation certificate, the Authority shall provide the person involved with a new license or validation certificate omitting all ratings which are subject to the suspension.

(6) The Authority may cancel a suspension in the following cases :

(*i*) If person under suspension has taken and passed the knowledge or practical tests required for any license, rating, or authorisation at issue indicated in (*a*) ;

(*ii*) If the person involved has gained the required additional experience ; or

(*iii*) By revocation of the license, rating, authorisation and/or validation certificate.

(7) Once the suspension has been cancelled, other than by revocation, the Authority shall issue the person involved a new license or validation certificate.

Suspension of a Medical Certificate.

2.2.9.2.—(*a*) In case of doubt concerning the medical fitness of the holder of a medical certificate the Authority may determine that the person involved shall again repeat a complete or partial medical examination, and may suspend the validity of that medical certificate until the repeat examination is completed with favourable results.

(*b*) The validity of a medical certificate may also be suspended in case of a temporary rejection on medical grounds.

(*c*) The person holding the medical certificate shall be notified in writing of a suspension stating the reasons for that suspension.

(*d*) The person holding the suspended medical certificate shall surrender the medical certificate in his or her possession to the Authority within 7 days after the date of receiving the notification.

(*e*) In cases in which the medical fitness of the person involved allows it, the Authority may provide the person with a suspended medical certificate of a particular class with a new medical certificate of a lower class.

(*f*) A suspension may be lifted if the medical examination intended in (*a*) has been passed satisfactorily. If a suspension is lifted, the person involved shall receive a new medical certificate unless the medical certificate was revoked.

Revocation of Licences, Ratings Authorisations or Certificates.

2.2.9.3—(*a*) A licence, rating, authorisation or certificate shall be revoked if the holder has lost the skills for exercising the privileges mentioned in the document or fails to meet the appropriate medical standards as shown by the results of a medical examination or a test.

(*b*) A licence, rating, authorisation and/or certificate may be revoked if the holder has made a statement contrary to the truth in obtaining or maintaining that licence, rating authorisation or certificate, or has provided incorrect data at a medical examination and/or test required for the issue, maintenance or renewal of the licence, rating, authorisation and certificate.

(*c*) A licence, rating, authorisation or certificate shall be revoked in case of proven misconduct, recklessness or excessive carelessness. The holder of the licence will be notified in writing of the revocation with the reasons therefore.

(*d*) A person who has had a licence or certificate revoked shall be obliged to hand over to the Authority all the licences or certificates in his or her possession applicable to the revocation within 8 days after the date of receiving notification from the Authority.

(*e*) The person who has been denied the privilege to manipulate the controls of an aircraft by judgement of a court, shall be equally obliged to hand over to the Authority all licences and certificates in his or her possession within 8 days after he or she has taken cognisance of the judgement or after it can be reasonably assumed that he or she has taken cognisance thereof.

2.3. PILOT LICENCES, CATEGORIES, RATINGS, AUTHORISATIONS, ENDORSEMENTS, INSTRUCTORS FOR PILOT LICENSING, AND DESIGNATED PILOT EXAMINERS.

2.3.1. GENERAL

Applicability.

2.3.1.1.—(*a*) This Section prescribes the requirements for the issue, renewal and re-issue, if applicable, of pilot licences, ratings and authorisations.

(*b*) A person shall not act either as pilot-in-command or as co-pilot of an aircraft in any of the following categories unless that person is the holder of a pilot licence issued in accordance with the provisions of this Section :

(1) aeroplane.

(2) airship of a volume of more than 4 600 cubic metres.

(3) free balloon.

(4) glider.

(5) helicopter.

(6) powered-lift.

General Rule Concerning Licences, Ratings and Authorisations.

2.3.1.2.—(*a*)(*i*) An applicant shall, before being issued with any pilot licence, rating, authorisation or designation, meet such requirements in respect of age, knowledge, experience, flight instruction, skill, medical fitness and language proficiency as are specified for that licence, rating or authorisation.

(*ii*) An applicant for any pilot licence or rating shall demonstrate, in a manner determined by the Authority, such requirements for knowledge and skill as are specified for that licence or rating.

(*b*) A person shall not act either as PIC or as co-pilot of an aircraft in any of the categories unless that person is the holder of a pilot licence issued in accordance with the provisions of Part 2.

(*c*) An applicant shall for renewal or re-issue of a licence, rating, authorisation or designation, meet the requirements as are specified for that licence, rating, authorisation or designation.

Authority to Act as a Flight crew member.

2.3.1.3.—(*a*) A person shall not act as a pilot flight crewmember of an aircraft registered in Nigeria unless a valid licence or a validation certificate is held showing compliance with the specifications of this Part 2 and appropriate to the duties to be performed by that person.

(*b*) No person may act as the PIC or co-pilot of an aircraft unless that person holds the appropriate category, class and type rating for the aircraft to be flown.

(*c*)During a skill test, the applicant acts as PIC but the safety pilot will intervene in safety situations.

2.3.1.4.—(*a*) A student pilot or the holder of a pilot licence shall be entitled to be credited in full with all solo, dual instruction and PIC flight time towards the total flight time required for the initial issue of a pilot licence or the issue of a higher grade of pilot licence.

Crediting of Flight Time.

(*b*) The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certificated for operation by a single pilot but required by Nigeria to be operated with a co-pilot shall be entitled to be credited with not more than 50 per cent of the co-pilot flight time towards the total flight time required for a higher grade of pilot licence. Nigeria may authorise that flight time be credited in full towards the total flight time required if the aircraft is equipped to be operated by a co-pilot and the aircraft is operated in a multi-crew operation.

(*c*) The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certificated to be operated with a co-pilot, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

(*d*) The holder of a pilot licence, when acting as PIC under supervision, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

2.3.1.5.—(*a*) No person who holds a pilot licence issued under this Part shall serve as a PIC in single pilot operations on a civil aircraft of Nigerian registry engaged in commercial air transport operations if the person has reached his or her 60th birthday.

Limitation of Privileges of Pilots who have Attained their 60th Birthday and Curtailment of Privileges of Pilots who have Attained their 65th Birthday.

(*b*) For commercial air transport operations on a civil aircraft of Nigerian registry requiring more than one pilot, one pilot may be up to 65 years of age provided the other pilot is less than 60 years of age.

2.3.1.6.—*Note* : For commercial air transport operations, see Nig. CARs 8:8.4.

Recent Experience and Proficiency Requirements Non-Commercial Air Transport Operations.

(*a*) In order to maintain recency and proficiency, all pilots shall meet the applicable requirements in (*b*)-(*g*) below.

No person shall operate as PIC of an aircraft unless, that pilot has within 24 months, accomplished a flight review that includes :

(1) A review of the current general operating and flight rules of Nig. CARs Part 8 ;

(2) A review of those manoeuvres and procedures that, at the discretion of the person giving the review are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot licence ;

(3) A proficiency check in the appropriate aircraft for the licence, ratings or authorisations held, unless within the past 12 months, the pilot has satisfactorily completed one of the following—

(*i*) A pilot proficiency check or practical test conducted by a designated examiner, for a pilot certificate, rating, or operating privilege.

(*ii*) A practical test conducted by a designated examiner for the issuance of a flight instructor certificate, an additional rating on a flight instructor certificate, renewal of a flight instructor certificate, or reinstatement of a flight instructor certificate ; and

(4) A logbook endorsement from an authorised instructor who gave the review, certifying that the person has satisfactorily completed the review required in (*i*) and (*ii*) above and completed the applicable proficiency check.

(*a*) Aircraft type certificated for more than one pilot.

(1) No person may act as PIC of an aircraft type certified for more than one pilot or a turbojet aircraft unless, since the beginning of the past 12 calendar months, he or she has passed a proficiency check in an aircraft, or in a flight simulation training device approved for the purpose, with a designated examiner.

(2) No person may act as co-pilot of an aircraft type certified for more than one pilot unless, since the beginning of the past 12 calendar-months, he or she has logged 3 takeoff and landings as the sole manipulator of the controls in the aircraft of the same type, or in a flight simulation training device approved for the purpose, with each takeoff and landing to full stop, and have satisfactorily completed ground training appropriate to the aircraft type.

(*b*) Aircraft type certificated for single pilot and requiring a type rating on the pilot license. No person may act as PIC of an aircraft type certified for a single pilot unless, since the beginning of the 12 calendar-months, he or she has passed a proficiency check with a designated examiner in the category, class and type of aircraft to be operated, or in a flight simulation training device approved for the purpose.

(*e*) Recency for Carriage of Passengers. No person may act as PIC or co-pilot of an aircraft carrying passenger sunless, within the preceding 90 days that pilot has :

(1) Made 3 takeoffs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and if a type rating is required, of the same type or in a flight simulation training device approved for the purpose.

(2) For a tail wheel aeroplane, made the 3 takeoffs and landings in a tail wheel aeroplane with each takeoff and landing to a full stop.

(3) For night operations, made the 3 takeoffs and landings required by paragraph (*a*)(1) at night with each takeoff and landing to a full stop.

(*f*) *IFR Operations*—A pilot shall not operate as PIC of an aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless within the preceding twelve (12) months :

(1) The pilot had an instrument proficiency check on the maneuvers in the IR Skill Test and Proficiency Check contained in IS 2.3.8.2, or

(2) Has logged in actual or simulated conditions six hours instrument flight time including at least three hours in flight in the category of aircraft; to include.

(*i*) six instrument approaches ;

(*ii*) holding procedures and tasks ; and

(*iii*) intercepting and tracking courses through the use of navigational electronic systems.

(*g*) *Night Vision Goggle Operations*—No person may act as PIC in a night vision goggle operation unless.

(1) that pilot has performed and logged the following tasks as the sole manipulator of the controls on a flight during a night vision goggle operation, within the preceding 60 days to carry passengers on board, or within the preceding 120 days to act as PIC without passengers on board :-

(*i*) three takeoffs and landings, with each takeoff and landing including a climb out, cruise, descent, and approach phase of flight, if the pilot intends to use night visions goggles during the takeoff and landing phase of flight ;

(*ii*) three hovering tasks, if the pilot intends to use night vision goggles when operating helicopters or powered- lifts during the hovering phase ;

(*iii*) three area departure and area arrival tasks ;

(*iv*) three tasks of transitioning from aided night flight to unaided night flight and back to aided night flight.

(*v*) three night vision goggle operations, or when operating helicopters or powered-lifts, 6 night vision goggle operations ; or

(2) Successfully completed a proficiency check with an authorised representative of the Authority.

Recording of Flight Time.

2.3.1.7.—(*a*) Each person shall document and record the following time in a manner acceptable to the Authority as outlined in IS 2.3.1.7 :

(1) Training and experience used to meet the requirements for a licence, rating and authorisation of Part 2 ; and

(2) The experience required to show recent flight experience according to the requirements of Part 2.

2.3.2. CATEGORY, CLASS AND TYPE RATINGS, CATEGORY II/III AUTHORISATIONS, AND ENDORSEMENTS.

General.

2.3.2.1.—(*a*) The holder of a pilot licence shall not be permitted to act as PIC or as co-pilot of an aircraft unless the holder has received the applicable ratings, authorisations and/or endorsements as follows :

(1) The appropriate aircraft category rating specified in this Part ;

(2) The appropriate class rating when required in accordance with in this Part ;

(3) A type rating when required in accordance with this Part ;

(4) An authorisation when required in accordance with this Part ; or

(5) An endorsement when required in accordance with this Part.

(*b*) The applicant shall meet the appropriate requirements of this Part for the aircraft rating, authorisation or endorsement sought.

(*c*) When an applicant demonstrates skill and knowledge for the initial issue or re-issue of a pilot licence, the category and ratings appropriate to the class or type of aircraft used in the demonstration shall be entered on the licence.

(*d*) For the purpose of training, testing or specific special purpose non-revenue, non-passenger carrying flights, special authorisation may be provided in writing to the licence holder by the Authority in place of issuing the class or type rating in accordance with (*a*). This authorisation shall be limited in validity to the time needed to complete the specific flight.

Category Ratings.

2.3.2.2.—(*a*)(1) The category of aircraft shall be included in the title of the licence itself, or endorsed as a category rating on the licence.

(2) Category ratings shall not be endorsed on a licence when the category is included in the title of the licence itself.

(*b*) *Initial category rating.*

(1) An applicant for a pilot's licence, after successfully meeting all requirements for the issuance of the licence as contained in this Part, shall receive the appropriate licence with the aircraft category, and if applicable, class or type rating endorsed on the licence.

(*c*) *Additional category ratings.*

(1) Any additional category rating endorsed on a pilot licence shall indicate the level of licensing privileges at which the category rating is granted.

(2) The holder of a pilot licence seeking an additional category rating shall :

(*i*) Meet the requirements of this Part appropriate to the privileges for which the category rating is sought ;

(*ii*) Have an endorsement is his/her logbook or training record from an authorised instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas ;

(*iii*) Pass the required knowledge test ; and

(*iv*) Pass the required skill test for the aircraft category, and if applicable, class rating being sought.

(*v*) When the holder of a pilot licence seeks a licence for an additional category of aircraft, the Authority shall either: issue the licence holder with an additional pilot licence for that category of aircraft ; or endorse the original licence with the new category rating, subject to the conditions of 2.3.2.2.

(*d*) *Privileges*— Subject to compliance with the requirements specified in this Part, the privileges of the holder of a class rating are to act as a pilot on the class of aircraft specified in the rating.

(*e*) The validity, renewal or reissue of the category rating will coincide with the requirements for validity, renewal or reissue of the licence, and if applicable class or type rating contained in this Part.

2.3.2.3.—(*a*)(1) The class of aircraft, if applicable, shall be endorsed on the licence as a rating. Class Ratings.

(2) The applicant shall have demonstrated a degree of skill appropriate to the licence in an aircraft of the class for which the rating is sought.

(*b*) *Initial class rating.*

(1) An applicant for a pilot's licence, after successfully meeting all requirements for the issuance of the licence as contained in this Part, shall receive the appropriate licence with the aircraft category, class, and if applicable, type rating endorsed on the licence.

(*c*) *Additional class ratings.*

(1) Any additional class rating endorsed on a pilot licence shall indicate the level of licensing privileges at which the class rating is granted.

(2) The holder of a pilot licence seeking an additional class rating shall :

(*i*) Meet the requirements of this Part appropriate to the privileges for which the class rating is sought ;

(*ii*) Have an endorsement is his/her logbook or training record from an authorised instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas ;

(*iii*) Pass the required knowledge test unless the applicant holds a class rating within the same category of aircraft, at the same level of pilot licence at either the private or commercial levels ; and

(*iv*) Pass the required skill test for the aircraft class rating being sought.

(*d*) *Privileges*.—Subject to compliance with the requirements specified in this Part, the privileges of the holder of a class rating are to act as a pilot on the class of aircraft specified in the rating.

(*e*) *Validity.*—Subject to compliance with the requirements specified in this Part, the validity period of :

(1) A multi-engine class rating is 1 calendar year.

(2) A single-engine class rating ; balloon gas or balloon hot air rating is 2 calendar years.

(*f*) *Renewal.*—(1) For the renewal of a single-engine class rating, a balloon gas rating or a balloon hot air rating, the pilot shall :

(*i*) Within the preceding 24 calendar months, complete a proficiency check on areas of operation listed in the skill test that is applicable to the level of licence, category and class rating ; and

(*ii*) Have completed 12 hours flight time within the 12 months preceding the expiry date.

(2) For the renewal of a multi-engine class rating the pilot shall :

(*i*) Within the preceding 12 calendar months, complete a proficiency check on the subjects listed in the skill test that is applicable to the level of licence, category and class rating ; and (*ii*) Have completed 10 route sectors within the 3 months preceding the expiry date.

(3) Where applicable the proficiency check shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.

(4) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(*g*) Re-issue. If the class rating has expired the applicant shall :

(1) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test ; and

(2) Pass the required skill test for the applicable aircraft category and/or class.

(3) Where applicable the skill test shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.

Type Ratings.

2.3.2.4.—(*a*) The type rating shall be endorsed on the licence as a rating, including any limitations.

(*b*) The applicant shall have :

(1) gained, under appropriate supervision, experience in the applicable type of aircraft and/or flight simulator in the following :

(*i*) normal flight procedures and maneuvers during all phases of flight ;

(*ii*) abnormal and emergency procedures and maneuvers in the event of failures and malfunctions of equipment, such as engine, systems and airframe ;

(*iii*) where applicable, instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure ;

(*iv*) procedures for crew incapacitation and crew coordination including allocation of pilot tasks; crew cooperation and use of checklists ;

(2) demonstrated the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the duties of a pilot-in-command or a co-pilot as applicable ; and

(3) demonstrated, at the airline transport pilot licence level, an extent of knowledge determined by the Authority on the basis of the requirements specified in 2.3.6.1(*c*) of this regulation.

(*i*) Applicants seeking a private or commercial licence in an aircraft that requires a type rating shall also complete the applicable portions of either PPL or CPL skill test in conjunction with the ATPL skill test.

(*ii*) The applicant shall have demonstrated the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the licensing requirements and piloting functions of the applicant.

(*c*) *Privileges*.—Subject to compliance with the requirements specified in this Part, the privileges of the holder of a type rating are to act as a pilot on the type of aircraft specified in the rating. When a type rating is issued limiting the privileges to act as co-pilot or limiting the privileges to act as pilot only during the cruise phase of flight, such limitation shall be endorsed on the rating.

(*d*) *Validity*.—Subject to compliance with the requirements in this Part, the validity period of a type rating is 1 calendar year.

(*e*) *Renewal*.—For the renewal of a type rating the pilot shall :

(1) Within the preceding 12 calendar months, complete a proficiency check : in the areas of operation listed in the skill test for the appropriate category, type and if applicable class of aircraft.

(2) Have completed 10 route sectors within the 3 months preceding the expiry date.

(3) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(*f*) *Re-issue*.—If the type rating has been expired the applicant shall :

(1) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test ; and

(2) Pass the required skill test for the appropriate category, type and if applicable class of aircraft.

Category II and III Authorisation.

2.3.2.5—(*a*) The Authority will issue a Category II or Category III pilot authorisation by letter, to accompany the pilot's licence, when the pilot meets the requirements contained in paragraph and IS 2.3.2.5.

(*b*) General.

(1) A person, not flying for an AOC holder under Part 9, may not act as pilot of an aircraft during Category II or III operations unless that person holds a Category II or III pilot authorisation for that category, class or type of aircraft.

(2) The applicant for a Category II or III pilot authorisation shall :

(*i*) Hold a pilot licence with an instrument rating or an ATPL ; and

(*ii*) Hold a category and class or type rating for the aircraft for which the authorisation is sought.

(*c*) *Knowledge*.—The applicant for a Category II or III pilot authorisation shall have completed the theoretical knowledge instruction on the subjects as listed in IS 2.3.2.5.

(*d*) *Experience*.—The applicant for a Category II or III pilot authorisation shall have at least :

(1) 50 hours of night flight time as PIC ;

(2) 75 hours of instrument time under actual or simulated instrument conditions ; and

(3) 250 hours of cross-country flight time as PIC.

(*e*) *Flight instruction*. The applicant for a Category II or III pilot authorisation shall have completed the flight instruction on the areas of operation listed in IS 2.3.2.5.

(*f*) *Skill*.—The applicant for a Category II or III pilot authorisation shall pass a skill test including the areas of operation listed in IS 2.3.2.5.

(*g*) *Validity*—Subject to compliance with the requirements specified in this Part, the validity period of a Category II and III authorisation is 6 months.

(*h*) *Renewal*.—For the renewal of a Category II or III pilot authorisation the pilot shall have completed a proficiency check including the areas of operation listed in IS 2.3.2.5.

(*i*) *Re-issue*.—If the Category II or the Category III have been expired the applicant shall :

(1) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test ; and

(2) Pass the required skill test on the subjects listed in IS 2.3.2.5.

Complex Aeroplane Endorsement.

2.3.2.6.—(*a*) No person shall act as pilot in command of a complex aeroplane, including a seaplane, unless the person has :

(1) Received and logged ground and flight training from an authorised instructor in a complex aeroplane or flight simulation training device that is representative of a complex aeroplane and has been found proficient in the operation and systems of the aeroplane ; and

(2) Received a one-time endorsement in the pilot's logbook from an authorised instructor who certifies that person is proficient to operate a high performance aeroplane.

High Performance Aeroplane Endorsement.

2.3.2.7.—(*a*) No person shall act as pilot in command of a high performance aeroplane unless the person has :

(1) Received and logged ground and flight training from an authorised instructor in a high performance aeroplane or flight simulation training device that is representative of a high performance aeroplane and has been found proficient in the operation and systems of the aeroplane ; and

(2) Received a one-time endorsement in the pilot's logbook from an authorised instructor who certifies that person is proficient to operate a complex aeroplane.

High Altitude Aircraft Endorsement.

2.3.2.8.—(*a*) No person shall act as pilot in command of a pressurised aircraft capable of operating at high altitudes (an aircraft that has a service ceiling or maximum operating altitude, whichever is lower, above 25,000 MSL) unless the person has :

(1) Received and logged ground training from an authorised instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished ground training in at least the in the following subjects :

(*i*) High-altitude aerodynamics and meteorology ;

(*ii*) Respiration ;

(*iii*) Effects, symptoms, and causes of hypoxia and any other high-altitude sickness ;

(*iv*) Duration of consciousness without supplemental oxygen ;

(*v*) Effects of prolonged usage of supplemental oxygen ;

(*vi*) Causes and effects of gas expansion and gas bubble formation ;

(*vii*) Physical phenomena and incidents of decompression; and any other physiological aspects of high-altitude flight.

(2) Received and logged flight training from an authorised instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished flight training in an aircraft or in a flight simulation training device that is representative of a pressurised aircraft, in at least the in the following subjects :

(*i*) Normal cruise flight operations while operating above 25,000 feet MSL ;

(*ii*) Proper emergency procedures for simulated rapid decompression without actually depressurising the aircraft ; and

(*iii*) Emergency descent procedures.

Night Vision Goggles Endorsement.

2.3.2.9.—(*a*) No person shall act as pilot of an aircraft using night vision goggles, unless the person has received training from an authorised instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished at least the following ground training :

(1) Applicable portions of Part 2 and Part 8 that relate to night vision goggle limitations and flight operations ;

(2) Aeromedical factors related to the use of night vision goggles, including how to protect night vision, how the eyes adapt to night, self-imposed stresses that affect night vision, effects of lighting on night vision, cues used to estimate distance and depth perception at night, and visual illusions ;

(3) Normal, abnormal, and emergency operations of night vision goggle equipment ;

(4) Night vision goggle performance and scene interpretation ;

(5) Night vision google operation flight planning, including night terrain interpretation and factors affecting terrain interpretation ;

(*b*) No person shall act as pilot of an aircraft using night vision goggles, unless the person has received training from an authorised instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished at least the following flight training :

(1) Preflight and use of internal external aircraft light systems for night vision goggle operations ;

(2) Preflight preparation of night vision goggles for night vision goggle operations ;

(3) Proper piloting techniques when using night vision goggles during the takeoff, climb, enroute descent and landing phases of flight ; and

(4) Normal, abnormal, and emergency flight operations using night vision goggles.

(*c*) The requirements under paragraphs (*a*) and (*b*) of this section do not apply if a person can document satisfactory completion of any of the following pilot proficiency checks using night vision goggles in an aircraft :

(1) A pilot proficiency check on night vision goggle operations conducted by the military.

(2) A pilot proficiency check on night vision goggle operations under MCAR part 2 or part 8 conducted by an Examiner or Check Airman.

(3) A pilot proficiency check on night vision goggle operations conducted by a night vision goggle manufacturer or authorized instructor, when the pilot—

(*i*) IS employed by a government or Law Enforcement Agency ; and

(*ii*) has logged at least 20 hours as pilot in command in night vision goggle operations.

2.3.3. STUDENT PILOTS

General Require-ments.

2.3.3.1.—(*a*) *Age* **-** The applicant for a student pilot authorisation shall be not less than 16 years of age.

(*b*) *Knowledge.*—The applicant for a student pilot authorisation shall receive and log ground training from an authorised instructor on the following subjects :

(1) Applicable Sections of Part 2 for the category of aircraft to be flown and Part 8 ;

(2) Airspace rules and procedures for the aerodrome where the student will perform solo flight ; and

(3) Flight characteristics and operation limitations for the make and model of aircraft to be flown.

(*c*) *Pre-solo flight instruction*.—Prior to conducting a solo flight, a student pilot shall have :

(1) Received and logged flight training for the manoeuvres and procedures applicable to the aircraft category including flight training in those manoeuvres and procedures at night, if the solo flight is to be conducted at night.

(2) Demonstrated satisfactory proficiency and safety, as judged by an authorised instructor, on the manoeuvres and procedures for the appropriate category, and class if applicable, of aircraft.

(*d*) *Solo flight requirements* : A student pilot shall not fly solo :

(1) Unless holding at least a Class 2 Medical Certificate ; and

(2) Unless under the supervision of, or with the authority of, an authorized flight instructor, and ;

(3) In international flight unless there is a special or general arrangement between Nigeria and the intended State of flight.

(*e*) A student pilot shall meet the requirements prescribed by the Authority. The Authority shall ensure that the privileges granted shall not permit student pilots to constitute a hazard to air navigation.

2.3.3.2. Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Traning-Aeroplane Category.

(*a*) An applicant for a student pilot authorisation in the aeroplane category shall receive training in the manoeuvres and procedures contained in IS 2.3.3.2.

2.3.3.3. Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Training-Helicopter Category.

(*a*) An applicant for a student pilot authorisation in the helicopter category shall receive training in the manoeuvres and procedures contained in IS 2.3.3.3.

2.3.3.4. Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Training-Powered-Lift Category.

(*a*) An applicant for a student pilot authorisation in the powered-lift category shall receive training in the manoeuvres and procedures contained in IS 2.3.3.4.

2.3.3.5. Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Training-Airship Category.

(*a*) An applicant for a student pilot authorisation in the airship category shall receive training in the manoeuvres and procedures contained in IS 2.3.3.5.

2.3.3.6. Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Training-Balloon Category.

(*a*) An applicant for a student pilot authorisation in the balloon category shall receive training in the manoeuvres and procedures contained in IS 2.3.3.6.

2.3.3.7. Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Training-Glider Category.

(*a*) An applicant for a student pilot authorisation in the glider category shall receive training in the manoeuvres and procedures contained in IS 2.3.3.7.

2.3.4. PRIVATE PILOT LICENCE

General Requirements.

2.3.4.1.—(*a*) Age.

(1) The applicant for a PPL in all categories other than balloon and glider shall be not less than 17 years of age.

(2) The applicant for a PPL in the balloon or glider category shall be not less than 16 years of age.

(*b*) *Medical fitness*. —The applicant for a PPL shall hold a current Class 2 Medical Certificate as issued under this Part.

(*c*) *Knowledge Areas*.—The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a private pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects :

(1) Air law—

(*i*) rules and regulations relevant to the holder of a private pilot licence; rules of the air ; altimeter setting procedures; appropriate air traffic services practices and procedures ;

(2) Aircraft general knowledge for aeroplanes, airships, helicopters and powered-lifts—

(*i*) principles of operation and functioning of engines, systems and instruments ;

(*ii*) operating limitations of the relevant category of aircraft and engines; relevant operational information from the flight manual or other appropriate document ;

(*iii*) for helicopters and powered-lifts, transmission (power trains) where applicable ;

(*iv*) for airships, physical properties and practical application of gases;

(3) Flight performance, planning and loading—

(*i*) effects of loading and mass distribution on flight characteristics ; mass and balance calculations ;

(*ii*) use and practical application of take-off, landing and other performance data ;

(*iii*) pre-flight and en-route flight planning appropriate to private operations under VFR ; preparation and filing of air traffic services flight plans ; appropriate air traffic services procedures; position reporting procedures ; altimeter setting procedures ; operations in areas of high-density traffic.

(4) *Human performance.*

(*i*) Human performance relevant to the appropriate category of Aircraft including principles of threat and error management ;

(5) *Meteorology.*

(*i*) Application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry; hazardous weather conditions ;

(6) *Navigation.*

(*i*) Practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts ;

(7) *Operational procedures.*

(*i*) Application of threat and error management to operational performance ;

(*ii*) Altimeter setting procedures ;

(*iii*) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations ;

(*iv*) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards ;

(*v*) In the case of helicopters, and if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC ;

(8) *Principles of flight.*

(*i*) Principles of flight relating to the appropriate category of aircraft ;

(9) *Radiotelephony.*

(*i*) Communication procedures and phraseology as applied to VFR operations ; action to be taken in case of communication failure.

(*d*) *Knowledge Testing.*—The applicant for a PPL shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge subjects ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required written knowledge test on the knowledge areas listed in item (*c*).

(*e*) *Experience and Flight Instruction.*—An applicant for a PPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.

(*f*) *Skill*—The applicant for a PPL shall :

(1) Have received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test.

(2) Have demonstrated by passing a skill test the ability to perform as PIC of an aircraft, within the appropriate category areas of operation described in the appropriate IS listed below, with a degree of competency appropriate to the privileges granted to the holder of a PPL.

(3) Have demonstrated the ability to—

(*i*) Recognize and manage threats and errors ;

(*ii*) Operate the aircraft within its limitations ;

(*iii*) Complete all manoeuvres with smoothness and accuracy ;

(*iv*) Exercise good judgement and airmanship ;

(*v*) Apply aeronautical knowledge ; and

(*vi*) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(*g*) *Privileges.*

Subject to compliance with the requirements specified in this Part, the privileges of the holder of a PPL shall be to act, but not for remuneration, as PIC or co-pilot of an aeroplane aircraft within the appropriate aircraft category engaged in non-revenue flights.

(*i*) The privileges of the holder of a glider category rating shall be to act as pilot-in-command of any glider provided the holder has operational experience in the launching method used.

(*ii*) If passengers are to be carried, the holder shall have completed not less than 10 hours of flight time as a pilot of gliders.

(*iii*) If the privileges of the rating are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying.

(*iv*) If passengers are to be carried for remuneration or hire, the holder shall have completed not less than 35 hours of flight time including 20 hours as a pilot of a free balloon.

(*v*) The privileges of the holder of a free balloon category rating shall be to act as pilot-in-command of any free balloon provided that the holder has operational experience in hot air or gas balloons as appropriate.

(*vi*) Before exercising the privileges at night, the holder of free balloon category rating shall have complied with the requirements specified in this regulations.

(*h*) *Validity.*—Subject to compliance with the requirements specified in this Part, the validity period of the licence is 5 years.

(*i*) *Renewal*.—A private pilot licence that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the licence, medical certificate, and recency of experience are current.

(*j*) *Reissue*.—If the private pilot licence has expired, the applicant shall have received refresher training acceptable to the Authority and passed the private pilot skill test

Experience and Flight Instruction for the PPL-Aeroplane Category.

2.3.4.2.—(*a*) Experience.

(1) The applicant for a PPL (A) shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as pilot of aeroplanes, appropriate to the class rating sought. The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 40 or 35 hours, as the case may be. Credit for such experience shall be limited to a total of 5 hours if completed in under instruction in a flight simulator or flight procedures trainer approved by the Authority.

(2) The applicant shall have completed in aeroplanes not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two difference aerodromes shall be made.

(3) The holder of pilot licences in other categories may be credited with 10 hours of the total flight time as PIC towards a PPL (A).

(*b*) Flight Instruction.

(1) The applicant for a PPL (A) shall receive and log not less than 20 hours of dual instruction from an authorised instructor on the subjects listed in IS 2.3.4.2. These 20 hours may include 5 hours completed in a flight simulation training device. The 20 hours of dual instruction shall include at least 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot :

(*i*) Pre-flight operations, including mass and balance determination, aeroplane inspection and servicing ;

(*ii*) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(*iii*) Control of the aeroplane by external visual reference ;

(*iv*) Flight at critically slow airspeeds; recognition of, and recovery from, incipient and full stalls ;

(*v*) Flight at critically high airspeeds; recognition of, and recovery from, spiral dives ;

(*vi*) Normal and cross-wind take-offs and landings ;

(*vii*) Maximum performance (short field and obstacle clearance take-offs, short-field landings ;

(*viii*) Flight by reference solely to instruments, including the completion of a level 180 degrees turn ;

(*ix*) Cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids ;

(*x*) Emergency operations, including simulated aeroplane equipment malfunctions ; and

(*xi*) Operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology ;

(*xii*) Recognize and manage threats ; and errors

(*xiii*) As further specified in IS 2.3.4.2.

(3) If the privileges of the PPL(A) are to be exercised at night, the applicant shall have received 4 hours dual instruction in aeroplanes in night flying, including take-offs, landings and 1 hour of navigation.

2.3.4.3. PPL Skill Test-Aeroplane Category.

(*a*) The requirements for the skill test for the PPL(A) are included in IS 2.3.4.2.

2.3.4.4. Experience and Flight Instruction for the PPL-Helicopter Category.

(*a*) *Experience.*

(1) The applicant shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a pilot of helicopters. The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 40 hours or 35 hours, as the case may be. Credit for such experience shall be limited to a maximum of 5 hours.

(2) The applicant shall have completed in helicopter not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

(3) The holder of pilot licences in other powered aircraft categories may be credited with 10 hours of the total flight time as PIC towards a PPL(H).

(*b*) *Flight Instruction.*

(1) The applicant for a PPL(H) shall receive and log not less than 20 hours of dual instruction from an authorised instructor on the subjects listed in IS 2.3.4.3. These 20 hours may include 5 hours completed in a flight simulation training device. The 20 hours of dual instruction shall include at least 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot :

(*i*) Recognise and manage threats and errors ;

(*ii*) Pre-flight operations, including mass and balance determination, helicopter inspection and servicing ;

(*iii*) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(*iv*) Control of the helicopter by external visual reference ;

(*v*) Recovery at the incipient stage from settling with power ; recovery techniques from low-rotor rpm within the normal range of engine rpm ;

(*vi*) Ground manoeuvring and run-ups ; hovering; take-offs and landings –normal, out of wind and sloping ground ;

(*vii*) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques ; restricted site operations; quick stops ;

(*viii*) Cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids including a flight of at least one hour ;

(*ix*) Emergency operations, including simulated helicopter equipment malfunctions ; autorotative approach and landing ; and

(*x*) Operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology.

(3) If the privileges of the PPL(H) are to be exercised at night, the applicant shall have received 4 hours dual instruction in helicopters in night flying, including take-offs, landings and 1 hour of navigation.

(4) The applicant shall have received dual instrument flight instruction from an authorized flight instructor. The instructor should ensure that the applicant has operational experience in flight by reference solely to instruments, including the completion of a level 180° turn, in a suitably instrumented helicopter.

2.3.4.5. PPL Skill Test-Helicopter Category.

(*a*) The requirements for the skill test for the PPL(H) are included in IS 2.3.4.3 .

Experience and Flight Instruction for the PPL—Powered-Lift Category.

2.3.4.6.—(*a*) *Experience.*

(1) The applicant for a PPL-Powered-Lift shall have completed not less than 40 hours of flight time as pilot of powered lift. The Authority will determine whether such experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 40 hours.

(2) When the applicant has flight time as a pilot of aircraft in other categories ; the Authority will determine whether such experience is acceptable and if so, the extent to which the flight time in item (*a*) may be reduced.

(3) The applicant shall have completed in a powered lift aircraft not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including five hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full stop landings at two different aerodromes shall be made.

(*b*) *Flight Instruction*.—The applicant shall have received not less than 20 hours of dual instruction time in powered-lifts from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot :

(1) recognize and manage threats and errors ;

(2) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing ;

(3) aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(4) control of the powered-lift by external visual reference ;

(5) ground maneuvering and run-ups ; hover and rolling Ground maneuvering and run-ups; hover and rolling take-offs and climb out; hover and rolling approach and landings–normal, out of wind and slopping ground ; take-offs and climb-out ; hover and rolling approach and landings-normal, out of wind and sloping ground ;

(6) take-offs and landings with minimum necessary power ; maximum performance take-off and landing techniques; restricted site operations ; quick stops ;

(7) flight by reference solely to instruments, including the completion of a level 180° turn ;

(8) recovery at the incipient stage from settling with power ; recovery techniques from low-rotor rpm within the normal range of engine rpm ;

(9) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour ;

(10) emergency operations, including simulated powered-lift equipment malfunctions ; power of reconversion to autorotation and authoritative approach, where applicable ; transmission and interconnect driveshaft failure, where applicable ;

(11) operations to/from and transiting controlled aerodromes, compliance with air traffic services procedures ; and

(12) communication procedures and phraseology.

Note—The instrument experience specified in 2.3.4.6(*b*)(7) and the night flying dual instruction specified in 2.3.4.2(*b*)(3) do not entitle the holder of a private pilot licence to pilot powered-lifts under IFR.

2.3.4.7. PPL Skill Test—Powered-Lift Category.

RESERVED

Experience and Flight Instruction for the PPL-Airship Category.

2.3.4.8.—(*a*) *Experience*.—The applicant for a PPL-Airship shall have completed not less than 25 hours of flight time as pilot of airships including at least :

(1) Three hours of cross-country flight training in an airship with a cross-country flight totalling not less than 45 kilometres (25 NM) ;

(2) Five take-offs and five landings to a full stop at an aerodrome with each landing involving a flight in the traffic pattern of an aerodrome ;

(3) Three hours of instrument time ; and

(4) Five hours as pilot assuming the duties of the PIC under the supervision of the PIC.

(*b*) *Flight Instruction*.—The applicant shall have received dual instruction from an authorised instructor in at least the following areas :

(1) Pre-flight operations, including mass and balance determination, airships inspections and servicing ;

(2) Ground reference manoeuvres ;

(3) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(4) Techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used ;

(5) Control of the airships by external visual reference ;

(6) Take-offs and landings and go-around ;

(7) Maximum performance (obstacle clearance) take-offs ;

(8) Flight by reference solely to instruments, including the completion of a level 180 degree turn ;

(9) Navigation, cross-country flying using visual reference, dead reckoning and radio navigation aids ;

(10) Emergency operations (recognition of leaks), including simulated airship equipment malfunctions ; and

(11) Radiotelephony procedures and phraseology.

2.3.4.9. PPL Skill Test-Airship Category.

(*a*) The requirements for the skill test for the PPL-Airship are included in IS 2.3.4.5.

Experience and Flight Instruction for the PPL-Balloon Category.

2.3.4.10.—(*a*) *Experience.*—The applicant for a PPL- balloon shall have completed not less than 16 hours of flight time as pilot of balloons including at least 8 launches and accents, at least one of which must be solo.

(*b*) *Flight Instruction.*—The applicant shall have received dual instruction in free balloons from an authorised instructor in at least the following areas :

(1) Pre-flight operations, including balloon assembly, rigging, inflation, mooring, and inspection ;

(2) Aerodrome operations, transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology ;

(3) Techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used ;

(4) Collision avoidance precautions ;

(5) Control of a free balloon by external visual references ;

(6) Recognition of and recovery from rapid descents ;

(7) Cross-country flying using visual reference and dead reckoning ;

(8) Approaches and landings, including ground handling ; and

(9) Emergency procedures.

2.3.4.11. PPL Skill Test-Balloon Category.

(*a*) The applicant for a balloon category shall have demonstrated the ability to perform as pilot-in-command of a free balloon, the procedures and manoeuvres described in relevant parts of this regulations with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence, and to :

(1) Recognize and manage threats and errors ;

(2) Operate the free balloon within its limitations ;

(3) Complete all manoeuvres with smoothness and accuracy ;

(4) Exercise good judgement and airmanship ;

(5) Apply aeronautical knowledge ; and

(6) Maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(*b*) The requirements for the skill test for the PPL-Balloon category are included in IS 2.3.4.6

Experience and Flight Instruction for the PPL-Glider Category.

2.3.4.12.—(*a*) *Experience.*—The applicant shall have completed not less than 6 hours of flight time as a pilot of gliders including 2 hours' solo flight time during which not less than 20 launches and landings have been performed.

(*b*) *Flight Instruction*.—The applicant shall have received dual instruction in gliders from an authorised instructor in at least the following areas :

(1) Pre-flight operations, including glider assembly and inspection ;

(2) Techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures and signals used ;

(3) Traffic pattern operations, collision avoidance precautions and procedures ;

(4) Control of the glider by external visual reference ;

(5) Flight throughout the flight envelope ;

(6) Recognition of, and recovery from, incipient and full stalls and spiral dives ;

(7) Normal and cross-wind launches, approaches and landings ;

(8) Cross-country flying using visual reference and dead reckoning ; and

(9) Emergency procedures.

(*c*) *Crediting of time in other aircraft categories*.—The holder of a pilot licence in the aeroplane category may be credited with 3 hours towards the 6 hours of flight time required for the glider licence.

PPL Skill Test-Glider Category

2.3.4.13.—(*a*) The requirements for the skill test for the PPL—Glider category are included in the IS 2.3.4.7.

2.3.5. COMMERCIAL PILOT LICENCE.

2.3.5.1. General requirements for the issue of the licence appropriate to the aeroplane, airship, helicopter and powered-lift categories.

(*a*) *Age* : The applicant for a CPL shall be not less than 18 years of age.

(*b*) *Medical Fitness*.—The applicant for a CPL shall hold a current Class 1 Medical Certificate issued under this Part.

(*c*) *Knowledge Areas.*—The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a commercial pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects :

(1) Air law

(*i*) Rules and regulations relevant to the holder of a commercial pilot licence ; rules of the air; appropriate air traffic services practices and procedures ;

(2) Aircraft general knowledge for aeroplanes, airships, helicopters and powered-lifts.

(*i*) Principles of operation and functioning of engines, systems and instruments ;

(*ii*) Operating limitations of the relevant category of aircraft and engines ; relevant operational information from the flight manual or other appropriate document ;

(*iii*) Use and serviceability checks of equipment and systems of appropriate aircraft ;

(*iv*) Maintenance procedures for airframes, systems and engines of appropriate aircraft ;

(*v*) For helicopters and powered-lifts, transmission (power trains) where applicable ;

(*vi*) For airships, physical properties and practical application of gases ;

(3) Flight performance, planning and loading.

(*i*) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations ;

(*ii*) Use and practical application of take-off, landing and other performance data ;

(*iii*) Pre-flight and en-route flight planning appropriate to commercial operations under VFR; preparation and filing of air traffic services flight plans ; appropriate air traffic services procedures ; altimeter setting procedures ;

(*iv*) In the case of airships, helicopters and powered-lifts, effects of external loading on handling ;

(4) *Human performance.*

(*i*) Human performance including principles of threats and error management ;

(5) *Meteorology.*

(*i*) Interpretation and application of aeronautical meteorological reports, charts and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry ;

(*ii*) Aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions ;

(*iii*) Causes, recognition and effects of icing ; frontal zone penetration procedures ; hazardous weather avoidance ;

(6) *Navigation.*

(*i*) Air navigation, including the use of aeronautical charts, instruments and navigation aids ; an understanding of the principles and characteristics of appropriate navigation systems ; operation of airborne equipment ;

(*ii*) In the case of airships ;

(*iii*) Use, limitation and serviceability of avionics and instruments necessary for control and navigation ;

(*iv*) Use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight, identification of radio navigation aids ;

(*v*) Principles and characteristics of self-contained and external referenced navigation systems, operation of airborne equipment ;

(7) Operational procedures.

(*i*) Application of threat and error management to operational performance ;

(*ii*) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations ;

(*iii*) Altimeter setting procedures ;

(*iv*) Appropriate precautionary and emergency procedures; (v) Operational procedures for carriage of freight; potential hazards associated with dangerous goods ;

(*vi*) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft ;

(*vii*) In the case of helicopters, and if applicable, powered-lifts, settling with power ; ground resonance ; retreating blade stall ; dynamic rollover and other operating hazards ; safety procedures, associated with flight in VMC ;

(8) Principles of flight.

(*i*) Principles of flight to the appropriate category of aircraft ;

(9) Radiotelephony.

(*i*) Communication procedures and phraseology as applied to VFR operations ; action to be taken in case of communication failure ; and

(*d*) *Knowledge Testing*.—The applicant for the CPL shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge subjects ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required knowledge test on the knowledge subjects listed above.

(*e*) *Experience and Flight Instruction*.—An applicant for a CPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.

(*f*) *Skill*.—The applicant for a CPL shall :

(1) Have received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test.

(2) Have demonstrated by passing a skill test the ability to perform as PIC of an aeroplane, the areas of operation as listed in IS: 2.3.5.2.with a degree of competency appropriate to the privileges granted to the holder of a CPL, and to.

(*i*) Operate the aeroplane within its limitations ;

(*ii*) Complete all manoeuvres with smoothness and accuracy ;

(*iii*) Exercise good judgement and airmanship ;

(*iv*) Apply aeronautical knowledge ; and

(*v*) Maintain control of the aeroplane at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(*vi*) recognize and manage threats and errors.

(*g*) *Privileges*.—Subject to compliance with the requirements specified in this Part, the privileges of the holder of a CPL shall be :

(1) To exercise all the privileges of the holder of a PPL in an aircraft within the appropriate aircraft category ;

(2) To act as PIC in an aircraft within the appropriate aircraft category engaged in operations other than commercial air transportation ;

(3) To act as PIC in commercial air transportation in an aircraft within the appropriate aircraft category certificated for single-pilot operation ;

(4) To act as co-pilot in aircraft within the appropriate aircraft category required to be operated with a co-pilot ; and

(5) For the airship category, to pilot an airship under IFR.

(*h*) *Validity.*—Subject to compliance with the requirements specified in this Part, the validity period of the licence is 5 years. For renewal of the licence see 2.2.4.

(*i*) *Renewal*.—A commercial pilot licence that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the licence, medical certificate, and recency of experience are current.

(*j*) *Reissue*.—If the commercial pilot licence has expired, the applicant shall have received refresher training acceptable to the Authority and passed the private pilot skill test.

2.3.5.2. Experience and Flight Instruction for the CPL-Aeroplane Category.

(*a*) Experience.

(1) The applicant for a CPL(A) shall have completed not less than 200 hours of flight time, or 150 hours if completed during an NCAA approved training course provided for in an Approved Training Organisation under Part 3, as a pilot of aeroplanes, of which 10 hours may have been completed in a flight simulation training device.

(2) The applicant shall have completed in aeroplanes not less than :

(*i*) 100 hours as PIC or, in the case of a course of approved training, 70 hours as PIC ;

(*ii*) 20 hours of cross-country flight time as PIC including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made ;

(*iii*) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time ;

(*iv*) If the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as PIC.

(3) The holder of a pilot licence in another category may be credited towards the 200 hours of flight time as follows :

(*i*) 10 hours as PIC in a category other than helicopters ; or

(*ii*) 30 hours as PIC holding a PPL(H) on helicopters ; or

(*iii*) 100 hours as PIC holding a CPL(H) on helicopters.

(4) The applicant for a CPL(A) shall hold a PPL(A) issued under this Part.

(*b*) *Flight Instruction.*

(1) The applicant for a CPL(*A*) shall receive and log not less than 25 hours of dual instruction from an authorised instructor. These 25 hours may include 5 hours completed in a flight simulation training device.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot :

(*i*) Recognise and manage threats and errors ;

(*ii*) Pre-flight operations, including mass and balance determination, aeroplane inspection and servicing ;

(*iii*) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(*iv*) Control of the aeroplane by external visual reference ;

(*v*) Flight at critically slow airspeeds; spin avoidance ; recognition of, and recovery from, incipient and full stalls ;

(*vi*) Flight with asymmetrical power for multi-engine class or type ratings ;

(*vii*) Flight at critically high airspeeds; recognition of, and recovery from, spiral dives ;

(*viii*) Normal and cross-wind take-offs and landings ;

(*ix*) Maximum performance (short field and obstacle clearance take-offs, short-field landings ;

(*x*) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments ;

(*xi*) Cross-country flying using visual reference, dead reckoning and radio navigation aids; diversion procedures ;

(*xii*) Abnormal and emergency procedures and manoeuvres including simulated aeroplane equipment malfunctions ;

(*xiii*) Operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures ; and

(*xiv*) Communication procedures and phraseology.

(3) If the privileges of the CPL(*A*) are to be exercised at night, the applicant shall have received 4 hours dual instruction in aeroplanes in night flying, including take-offs, landings and 1 hour of navigation.

(*c*) Skill test. The requirement for the skill test for the commercial pilot licence-aeroplane category are included in IS 2.3.5.2.

2.3.5.3. CPL Skill Test-Aeroplane Category.

(*a*) The requirement for the skill test for the commercial pilot licence—aeroplane category are included in IS 2.3.5.2.

2.3.5.4. Experience and Flight Instruction for the CPL-Helicopter Category.

(*a*) *Experience.*

(1) The applicant for a CPL(H) licence shall have completed not less than 150 hours of flight time, or 100 hours if completed during an integrated course of approved training provided for in an Approved Training Organisation under Part 3, as a pilot of helicopters, of which 10 hours may have been completed in a flight simulation training device.

(2) The applicant shall have completed in helicopters not less than :

(*i*) 35 hours as PIC ;

(*ii*) 10 hours of cross-country flight time as PIC including a cross-country flight in the course of which full-stop landings at two different points shall be made ;

(*iii*) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time ;

(*iv*) If the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as PIC.

(3) The holder of a pilot licence in another category may be credited towards the 150 hours of flight time as follows :

(*i*) 20 hours as PIC holding a PPL(A) in aeroplanes ; or (*ii*) 50 hours as PIC holding a CPL(A) in aeroplanes.

(4) The applicant for a CPL(H) shall hold a PPL(H) under this Part.

(*b*) Flight Instruction.

(1) The applicant for a CPL(H) shall have received and log not less than 30 hours of dual instruction in helicopters from an authorised flight instructor on the subjects listed in IS 2.3.5.3.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot :

(*i*) Recognise and manage threats and errors ;

(*ii*) Pre-flight operations, including mass and balance determination, helicopter inspection and servicing ;

(*iii*) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(*iv*) Control of the helicopter by external visual reference ;

(*v*) Recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm ;

(*vi*) Ground manoeuvring and run-ups; hovering; take-offs and landings – normal, out of wind and sloping ground; steep approaches ;

(*vii*) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques ; restricted site operations; quick stops ;

(*viii*) Hovering out of ground effect; operations with external load, if applicable; flight at high altitude ;

(*ix*) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments ;

(*x*) Cross-country flying using visual reference, dead reckoning and radio navigation aids ; diversion procedures ;

(*xi*) Abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing ; and

(*xii*) Operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology ;

(*xiii*) As further specified in IS 2.3.5.5.

(3) If the privileges of the licence are to be exercised at night, the applicant shall have received dual instruction in helicopters in night flying, including take-offs, landings and navigation.

CPL Skill Test-Helicopter Category.

2.3.5.5.—(*a*) The requirements for the skill test for the commercial pilot licence—helicopter category are included in IS 2.3.5.3.

Experience and Flight Instruction for the CPL–Powered-Lift Category.

2.3.5.6.—(*a*) *Experience.*

(1) The applicant shall have completed not less than 200 hours of flight time in a powered-lift, or 150 hours if completed during a course of approved training, as a pilot of aircraft. The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 200 hours or 150 hours, as the case may be.

(2) The applicant shall have completed in a powered-lift aircraft not less than :

(*i*) 50 hours as pilot in command ;

(*ii*) 10 hours in cross-country flying as pilot-in command including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full stop landing at two different aerodromes shall be made ;

(*iii*) 10 hours of instrument instruction of which not more than 5 hours may be instrument ground time ; and

(*iv*) If the privileges are to be exercised at night, 5 hours of night flight including 5 take-offs and landings as PIC.

(3) When the applicant has flight time as pilot of aircraft in other categories, the Authority may determine whether such experience is acceptable and if so, the extent to which the flight time requirements in item (*a*) may be reduced.

(*b*) *Flight instruction*.—The applicant shall have received dual instruction in powered-lift from an authorised instructor in at least the following areas to the level of performance required for the commercial pilot :

(1) Recognise and manage threats and errors to minimise their negative effects ;

(2) Pre-flight operations, including mass and balance determination, powered-lift inspection and servicing ;

(3) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(4) Control of the powered-lift by external visual reference ;

(5) Ground manoeuvring and run-ups; hover and rolling take-offs and climb out ; hover and rolling approach and landings – normal, out of wind and slopping ground ; steep approaches ;

(6) Take-offs and landings with minimum necessary power ; maximum performance take-off and landing techniques ; restricted site operations ; quick stops ;

(7) Hovering out of ground effect; operations with external load, if applicable ; flight at high altitude ;

(8) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments ;

(9) Cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour ;

(10) Emergency operations, including simulated powered-lift equipment malfunctions, where applicable ; power of reconversion to autorotation ; autorotative approach ; transmission and interconnect driveshaft failure ; and

(11) Operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology.

(12) Recovery at the incipient stage from settling with power ; recovery techniques from low-rotor rpm within the normal range of engine rpm.

2.3.5.7. CPL Skill Test-Powered-Lift Category.

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Experience and Flight Instruction for the CPL–Airship Category.

2.3.5.8.—(*a*) *Experience.*

(1) The applicant shall have completed not less than 200 hours of flight time as a pilot.

(2) The applicant shall have completed not less than :

(*i*) 50 hours as a pilot in airships ;

(*ii*) 30 hours as PIC or PIC under supervision in airships, to include not less than :

(*A*) 10 hours of cross-country flight time ; and

(*B*) 10 hours of night flight ;

(*iii*) 40 hours of instrument time, of which 20 hours shall be in flight and 10 hours in flight in airships ; and (*iv*) 20 hours of flight training in airships on the areas of operation listed in item (*b*) below.

(*b*) *Flight instruction.*—The applicant shall have received dual instruction in airships from an authorised instructor in at least the following areas to the level of performance required for the commercial pilot :

(1) Recognise and manage threats and errors ;

(2) Pre-flight operations, including mass and balance determination, airships inspection and servicing ;

(3) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures ;

(4) Techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used ;

(5) Control of the airships by external visual reference ;

(6) Recognition of leak ;

(7) Normal take-offs and landings ;

(8) Maximum performance (short field and obstacle clearance) take-offs; short-field landings ;

(9) Flight under IFR ;

(10) Cross-country flying using visual reference, dead reckoning and, where applicable, radio navigation aids ;

(11) Emergency operations, including simulated airship equipment malfunctions ;

(12) Operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures ; and

(13) Communications procedures and phraseology.

CPL Skill Test—Airship Category.

2.3.5.9.—(*a*) The requirements for the skill test for the CPL-Airship category are included in IS 2.3.5.5.

Experience and Flight Instruction for the CPL-Balloon Category.

2.3.5.10.—(*a*) *Experience.*—The applicant shall have completed at least :

(1) 35 hours flight time as a pilot, including at least :

(*i*) 20 hours as a pilot of free balloons ;

(*ii*) 10 flights in a free balloon ; and (*iii*) 2 flights in a free balloon as the pilot in command.

(2) 10 hours of flight training that includes at least 10 training flights in a free balloon on the areas of operation listed in (b) below, including at least :

(*i*) For a gas balloon rating :

(*A*) 2 training flights of 2 hours each in a bas balloon on the areas of operations appropriate to a gas balloon within 60 days prior to application for the rating ;

(*B*) 2 flights performing the functions of PIC in a gas balloon on the appropriate areas of operation ; and

(*C*) 1 flight involving a controlled ascent to 5,000 feet above the launch site.

(*ii*) For a hot air balloon rating :

(*A*) 3 training flights of 1 hour each in a balloon with an airborne heater on the areas of operation appropriate to a balloon with an airborne heater within 60 days prior to application for the rating ;

(*B*) 2 solo flights in a balloon with an airborne heater on the appropriate areas of operations ; and

(*C*) 1 flight involving a controlled ascent to 3,000 feet above the launch site.

(*b*) *Flight instruction.*—The applicant shall have received dual instruction in balloons from an authorised instructor in at least the following areas to the level of performance required for the commercial pilot :

(1) Recognise and manage threats and errors ;

(2) Technical subjects ;

(3) Pre-flight operations, including balloon assembly, rigging, inflation, mooring, and inspection ;

(4) Pre-flight lesson on a manoeuvre to be performed in flight ;

(5) Aerodrome operations, transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology ;

(6) Techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used ;

(7) Collision avoidance precautions ;

(8) Control of a free balloon by external visual references ;

(9) Recognition of and recovery from rapid descents ;

(10) Navigation and cross-country flying using visual reference and dead reckoning ;

(11) Approaches and landings, including ground handling ;

(12) Emergency procedures ; and

(13) Post-flight procedures.

CPL Skill Test-Balloon Category.

2.3.5.11.—(*a*) The requirements for the skill test for the CPL-Balloon category are included in IS 2.3.5.6.

Experience and Flight Instruction for the CPL-Glider Category.

2.3.5.12.—(*a*) *Experience*.—The applicant shall have completed at least :

(1) 25 hours flight time as a pilot in a glider and that flight time must include at least 100 flights in a glider as pilot in command, including at least.

(*i*) 3 hours of flight training or 10 training flight in gliders on the areas of operation listed in (*b*) below ; and

(*ii*) 2 hours of solo flight that includes not less than 10 solo flights in gliders on the areas of operations listed in (*b*) below ; or

(2) 200 hours of flight time as a pilot in either aeroplane, helicopter or powered-lift aircraft, and 20 flights in gliders as pilot in command, including at least.

(*i*) 3 hours of flight training or 10 training flights in gliders on the areas of operation listed in (*b*) below ; and

(*ii*) 5 solo flights in a glider on the areas of operation listed in (*b*) below.

(*b*) *Flight Instruction*.—The applicant shall have received dual instruction in a glider from an authorised instructor in at least the following areas of operation to the level of performance required for a commercial pilot :

(1) Recognise and manage threats and errors ;

(2) Pre-flight preparation ;

(3) Pre-flight procedures ;

(4) Aerodrome and glider port operations ;

(5) Launches and landings ;

(6) Performance speeds ;

(7) Soaring techniques ;

(8) Performance manoeuvres ;

(9) Navigation ;

(10) Slow flight and stalls ;

(11) Emergency procedures ; and

(12) Post-flight procedures.

2.3.5.13.—(*a*) The requirements for the skill test for the CPL–Glider category are included in IS 2.3.5.7.

CPL Skill Test—Glider Category.

2.3.6. MULTI-CREW PILOT LICENCE-AEROPLANE CATEGORY

General Requirements for the Issue of the Licence.

2.3.6.1.—(*a*) *Age*.—The applicant for the MPL shall be not less than 18 years of age.

(*b*) *Medical fitness*.—The applicant for the MPL shall hold a current Class 1 Medical Certificate issued under this Part.

(*c*) *Knowledge*.—The applicant for the MPL shall meet the requirements specified in 2.3.7.1 (*c*) for the ATPL appropriate to the aeroplane category.

(*d*) *Knowledge Testing*.—The applicant for an MPL shall.

(1)Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge subjects ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required written knowledge test on the knowledge areas specified in 2.3.7.1 (*c*).

Note : Depending upon the particular MPL curriculum, the knowledge test for the MPL may need to be an integrated test in that it contains elements of PPL, CPL, IR and/or ATPL knowledge.

(*e*) *Experience and flight instruction*.—The applicant shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.

(*f*) *Skill*.—The applicant for an MPL shall demonstrate the skills required for fulfilling all the required competency units in IS: 2.3.6.2 as pilot flying and pilot not flying, to the level required to perform as a co-pilot of turbine-powered aeroplanes certificated for operation with a minimum crew of at least two pilots under VFR and IFR, and have been continuously assessed in the training progress of acquiring the following skills :

(1) Recognize and manage threats and errors.

(2) Smoothly and accurately, manually control the aeroplane within its limitations at all times, such that the successful outcome of a procedure or maneuver is assured ;

(3) Operate the aeroplane in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation ;

(4) Perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight ; and

(5) Communicate effectively with other flight crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

(6) Have been continuously assessed in the training progress of acquiring the skills specified in this subpart.

(*g*) *Privileges*. —The privileges of the holder of a multi-crew pilot licence shall be as follows :

(7) Subject to compliance with the requirements specified in this Part, the privileges of the holder of a multi-crew pilot licence shall be :

(*i*) to exercise all the privileges of the holder of a private pilot licence in the aeroplane category provided the private pilot experience requirements of paragraph 2.3.4.2 have been met ;

(*ii*) to exercise the privileges of the instrument rating in a multi-crew operation ; and

(*iii*) to act as co-pilot of an aeroplane required to be operated with a co-pilot.

(8) Before exercising the privileges of the instrument rating in a single-pilot operation in aeroplanes, the licence holder shall have demonstrated an ability to act as pilot-in-command in a single-pilot operation exercised by reference solely to instruments and shall have met the instrument rating skill requirement specified in 2.3.8.2 appropriate to the aeroplane category.

(9) Before exercising the privileges of a commercial pilot licence in a single-pilot operation in aeroplanes, the licence holder shall have :

(*i*) completed in aeroplanes 70 hours, either as pilot-in-command, or made up of not less than 10 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision ;

(*ii*) completed 20 hours of cross-country flight time as pilot-in-command, or made up of not less than 10 hours as pilot-in-command and 10 hours as pilot-in-command under supervision, including a cross-country flight totaling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made ; and

(*iii*) met the requirements for the commercial pilot licence specified in 2.3.5.1 (*c*), 2.3.5.1 (*f*), 2.3.5.2 (*a*)(2) (with the exception of (*i*)) appropriate to the aeroplane category.

Note 1 : When a the Authority grants single-pilot operation privileges to the holder of a multi-crew pilot licence, it can document the privileges through an endorsement of the multi-crew pilot licence or through the issuance of a commercial pilot licence in the aeroplane category.

Note 2 : Certain privileges of the licence are curtailed by licence holders when they reach their 65th birthday.

(*h*) *Validity*.—Subject to compliance with the requirements specified in this Part, the validity period of the licence is 5 years. For renewal or reissue, see 2.2.1.7.

(*i*) *Renewal*.—A multi-crew pilot licence that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the licence, medical certificate, and recency of experience are current.

(*j*) *Reissue*.—If the multi-crew pilot licence has expired, the applicant shall have received refresher training acceptable to the Authority and passed the multi-crew pilot skill test.

Experience, Flight Instruction, and Skill Test for the Multi-crew Pilot LIcence-Aeroplane Category.

2.3.6.2.—(*a*) *Experience*.—The applicant shall have completed in an approved training course not less than 240 hours as pilot flying and pilot not flying of actual and simulated flight.

(1) The flight experience in actual flight shall include at least the experience for a PPL(*A*) as in 2.3.4.2, upset recovery training, night flying and flight by reference solely to instruments.

(2) In addition to meeting the provisions of 2.3.6.2(*a*)(1), the applicant shall have gained, in a turbine-powered aeroplane certificated for operations with a minimum crew of at least two pilots, or in a flight simulation training device approved for that purpose by the Authority, the experience necessary to achieve the advance level of competency defined in IS : 2.3.6.2.

(*b*) Flight instruction.

(1) The applicant shall have completed a course of approved training covering the experience requirements specified in 2.3.6.2(*a*).

(2) The applicant shall have received dual flight instruction in all the competency units specified in IS: 2.3.6.2 to the level required for the issue of the multi-crew pilot licence, to include the competency units required to pilot under instrument flight rules.

(*c*) *Skill Test*.—The requirement for the skill test for the multi-crew pilot licence—aeroplane category are included in IS 2.3.6.2.

2.3.7. AIRLINE TRANSPORT PILOT LICENCE

General requirements for the issue of the licence appropriate to the aeroplane, helicopter and powered-lift categories.

2.3.7.1.—(*a*) *Age*.—The applicant for an ATPL shall be not less than 21 years of age.

(*b*) *Medical Fitness*.—The applicant for an ATPL shall hold a current Class 1 Medical Certificate issued under this Part.

(*c*) *Knowledge*.—The applicant for an ATPL shall receive and log ground training from an authorised instructor on the following subjects appropriate to the privileges of the ATPL and to the category of aircraft intended to be included on the licence :

(1) *Air law* :

(*i*) Rules and regulations relevant to the holder of an ATPL; rules of the air ; appropriate air traffic services practices and procedures.

(2) *Aircraft general knowledge* :

(*i*) General characteristics and limitations of electrical, hydraulic, pressurisation and other aircraft systems; flight control systems, including autopilot and stability augmentation ;

(*ii*) Principles of operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance ; relevant operational information from the flight manual or other appropriate document ;

(*iii*) Operating procedures and limitations of appropriate aircraft; effects of atmospheric conditions on aircraft performance in accordance to the relevant operational information from the flight manual ;

(*iv*) Use and serviceability checks of equipment and systems of the relevant category of aircraft ;

(*v*) Flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments and electronic display units ;

(*vi*) Maintenance procedures for airframes, systems and powerplants of appropriate aircraft ;

(*vii*) For helicopter, and if applicable, powered-lift transmission (power-trains) ;

(3) *Flight performance and planning* :

(*i*) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance ; mass and balance calculations ;

(*ii*) Use and practical application of take-off, landing and other performance data, including procedures for cruise control ;

(*iii*) Pre-flight and en-route operational flight planning; preparation and filing of air traffic services flight plans ; appropriate air traffic services procedures; altimeter setting procedures ;

(*iv*) In the case of helicopter or powered-lift, effects of external loading on handling ;

(*v*) Human performance ;

(*vi*) Human performance relevant to the appropriate aircraft category ;

(*vii*) Principles of threat and error management ;

(4) *Meteorology* :

(*i*) Interpretation and application of aeronautical meteorological reports, charts and forecasts ; codes and abbreviations ; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight ; altimetry ;

(*ii*) Aeronautical meteorology ; climatology of relevant areas in respect of the elements having an effect upon aviation; the moment of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions ;

(*iii*) Causes, recognition and effects of icing; frontal zone penetration procedures ; hazardous weather avoidance ;

(*iv*) In the case of aeroplane and powered-lift, practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts ; jet streams ;

(5) *Navigation* :

(*i*) Air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights ;

(*ii*) Use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft ;

(*iii*) Use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids ;

(*iv*) Principles and characteristics of self-contained and external-referenced navigation systems; operation of airborne equipment ;

(6) *Operation procedures* :

(*i*) Application of threat and error management to operational performance ;

(*ii*) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations ;

(*iii*) Precautionary and emergency procedures; safety practices ;

(*iv*) Operational procedures for carriage of freight and dangerous goods ;

(*v*) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft ;

(*vi*) In the case of helicopter, and if applicable, powered-lift, settling with power; ground resonance ; retreating blade stall; dynamic roll-over and other operational hazards ; safety procedures, associated with flight under VFR ;

(7) *Principles of Flight* :

(*i*) Principles of flight relating to the appropriate aircraft category ;

(8) *Radiotelephony* :

(*i*) Communication procedures and phraseology; action to be taken in case of communication failure ;

(9) In addition to the above subjects, the applicant for an airline transport pilot licence applicable to the aeroplane or powered-lift category shall have met the knowledge requirements for the instrument rating at 2.3.8.

(*d*) *Knowledge testing.*—The applicant for the ATPL shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge subjects ; and

(*ii*) Certifies that the person is prepared for the required knowledge test ; and

(2) Pass the required written knowledge test on the knowledge subjects listed in item (*c*) above.

(*e*) *Experience and flight instruction.*—An applicant for an ATPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.

(*f*) *Skill.*—The applicant for an ATPL shall :

(1) Have received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test ; and

(2) Have demonstrated by passing a skill test the ability to perform, as PIC of an aircraft of the appropriate category required to be operated with a co-pilot, the following procedures and manoeuvres :

(*i*) Pre-flight procedures, including the preparation of the operational flight plan and filing of the air traffic services flight plan ;

(*ii*) Normal flight procedures and manoeuvres during all phases of flight ;

(*iii*) Abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as powerplant, systems and airframe ;

(*iv*) Procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation and use of checklists ; and

(*v*) In the case of the aeroplane and powered-lift, procedures and manoeuvres for instrument flight as described in 2.3.7 of these regulations, including simulated engine failure ;

(*vi*) In the case of aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in this paragraph as PIC in a multi engine aircraft.

(3) Have demonstrated by passing a skill test, the ability to perform the areas of operation described in IS 2.3.7.3, IS 2.3.7.4 and IS 2.3.7.5, with a degree of competency appropriate to the privileges granted to the holder of an ATPL, and to :

(*i*) Operate the aeroplane within its limitations recognise and manage threats and errors ;

(*ii*) Complete all manoeuvres with smoothness and accuracy smoothly and accurately manually control the aircraft within its limitations at all times, such that the successful outcome of a procedure or manoeuvre is assured ;

(*iii*) Operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation ;

(*iv*) Perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight ;

(*v*) Exercise good judgement and airmanship, to include structured decision making and the maintenance of situational awareness ; and

(*vi*) Communicate effectively with the other flight crewmembers and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures and use of checklists.

(*g*) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the holder of an ATPL shall be :

(1) To exercise all the privileges of the holder of a PPL and CPL of an aircraft within the appropriate aircraft category and class, if applicable

(2) In the case of the aeroplane and powered-lift categories, to exercise the privileges of the holder of an IR ; and

(3) To act as PIC and co-pilot in commercial air transportation in an aircraft of the appropriate category, and class if applicable.

(4) When the holder of an airline transport pilot licence in the aeroplane category has previously held only a multi-crew pilot licence, the privileges of the licence shall be limited to multi-crew operations unless the holder has met the requirements established in 2.3.6.1(*g*)(1) as appropriate. Any limitation of privileges shall be endorsed on the licence.

(*h*) Validity. Subject to compliance with the requirements specified in this Part, the validity period of the licence is 5 years. For renewal of the licence see 2.2.1.7 of these regulations.

2.3.7.2.—(*a*) *Experience.*

Experience and Flight Instruction for the ATPL-Aeroplane Category.

(1) The applicant for ATPL(*A*) shall have completed not less than 1 500 hours of flight time as a pilot of aeroplanes. Credit for such experience shall be limited to a maximum of 100 hours, of which not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

The applicant shall have completed in aeroplanes not less than ;

(*iv*) 500 hours as pilot-in-command under supervision or 250 hours, either as pilot-in-command, or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision ;

(*v*) 200 hours of cross-country flight time, of which not less than a 100 hours shall be as PIC or as co-pilot performing, under the supervision of the PIC, the duties and functions of the PIC, provided that the method of supervision employed is acceptable to the Authority ;

(*vi*) 75 hours of instrument time, of which not more than 30 hours will be instrument ground time ; and

(*vii*) 100 hours of night flight as PIC or as co-pilot.

(2) When the applicant has flight time as a pilot of aircraft in other categories, Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.3.7.2 (*a*)(1) can be reduced accordingly.

(3) The applicant shall have completed a CRM course on the subjects listed in IS 2.3.7.3.

(4) The applicant for an ATPL(A) shall be the holder of a CPL(A) with instrument and multi-engine rating issued under this Part.

(*b*) *Flight Instruction*.—The applicant for ATPL(A) shall have received dual flight instruction required for the issue of the CPL,and the IR or for the issue of the multi-crew pilot licence.

2.3.7.3.—(*a*) The skill test requirements for the airline transport pilot licence is included in IS 2.3.7.3.

ATPL SKill Test-Aeroplane Category.

Experience and Flight Instruction for the ATPL-Helicopter Category.

2.3.7.4.—(*a*) Experience.

(1) The applicant for ATPL(H) shall have completed not less than 1 000 hours of flight time as a pilot of helicopters. Credit for such experience shall be limited to a maximum of 100 hours, of which not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

The applicant shall have completed in helicopters not less than :

(*i*) 250 hours, either as pilot-in-command, or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision ;

(*ii*) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as PIC under supervision ;

(*iii*) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time ;

(*iv*) 50 hours of night flight as pilot-in-command or as co-pilot.

(2) Holders of a CPL(*A*) will be credited with 50 percent of their aeroplane flight time as PIC towards the flight time required in (1).

(3) The applicant shall have completed a CRM course on the subjects listed in IS 2.3.7.4.

(4) The applicant for an ATPL(H) shall be the holder of a CPL(H) issued under this Part.

(*b*) *Flight Instruction*.—The applicant for an ATPL(H) shall have received the dual flight instruction required for the issue of the CPL.

ATPL Skill Test—Helicopter Category.

2.3.7.5.—(*a*) The skill test requirements for the airline transport pilot licence for helicopters is included in IS 2.3.7.4.

Experience and Flight Instruction for the ATPL–Powered-Lift Category.

2.3.7.6.—(*a*) Experience.

(1) The applicant for an ATPL-Powered-lift category shall have completed not less than 1500 hours of flight time as a pilot of powered-lift. The Authority may determine whether experience completed under instruction in a flight simulator is acceptable as part of the total time of 1500 hours.

The applicant shall have completed in powered-lift not less than :

(*i*) 250 hours, either as pilot-in-command, or made up of not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision ;

(*ii*) 100 hours of cross-country flight time, of which not less than 50 hours should be as pilot-in-command or as pilot-in-command under supervision ;

(*iii*) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time ; and

(*iv*) 25 hours of night flight as pilot-in-command or as co-pilot.

(2) The Authority may determine if pilot flight time in other aircraft categories may be credited toward meeting the 1500 hour flight time in item (1) above.

(3) The applicant for an ATPL powered-lift shall be the holder of a CPL powered-lift issued under this Part.

(*b*) *Flight instruction*. The applicant for an ATPL-Powered-lift category shall have received the dual flight instruction required for the issue of the CPL powered lift category and for the issue of the instrument rating.

2.3.7.7. ATPL Skill Test-Powered-Lift Category.

RESERVED

2.3.8. INSTRUMENT RATING

2.3.8.1.—(*a*) *Age* : The applicant for an IR shall be not less than 17 year of age. General Requirements.

(*b*) *Medical fitness* :

(*i*) Applicants who hold a private pilot licence shall have established their hearing acuity on the basis of compliance with the hearing requirements for the issue of a Class 1 Medical Assessment.

(*ii*) The Authority shall require the holder of a private pilot licence to meet the physical, mental, and visual requirements for the issue of a class 1 medical assessment.

(*c*) *Knowledge*.—The applicant for an IR shall receive and log ground training from an authorised instructor on the following subjects.

(1) Air law :

(*i*) Rules and regulations relevant to flight under IFR; related air traffic services practices and procedures.

(2) Aircraft general knowledge for the aircraft category being sought :

(*i*) Use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of aeroplanes under IFR and in instrument meteorological conditions ; use and limitations of autopilot.

(*ii*) Compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects ; practices and procedures in the event of malfunctions of various flight instruments.

(3) Flight performance and planning for the aircraft category being sought :

(*i*) Pre-flight preparations and checks appropriate to flight under IFR.

(*ii*) Operational flight planning ; preparation and filing of air traffic services flight plans under IFR; altimeter setting procedures.

(4) Human performance for the aircraft category being sought :

(*i*) Human performance relevant to instrument flight in aircraft.

(*ii*) Principles of threat and error management.

(5) Meteorology for the aircraft category being sought :

(*i*) Application of aeronautical meteorology; interpretation and use of reports, charts and forecasts ; codes and abbreviations ; use of, and procedures for obtaining, meteorological information ; altimetry.

(*ii*) Causes, recognition and effects of icing ; frontal zone penetration procedures ; hazardous weather avoidance.

(*iii*) In the case of helicopter and powered-lift, effects of rotor icing.

(6) Navigation :

(*i*) Practical air navigation using radio navigation aids.

(*ii*) Use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids.

(7) Operation procedures for the aircraft category being sought :

(*i*) Application of threat and error management to operational principles.

(*ii*) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en-route, descent and approach.

(*iii*) Precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria.

(8) Radiotelephony :

(*i*) Communication procedures and phraseology as applied to aircraft operations under IFR; action to be taken in case of communication failure.

(*ii*) As listed in IS 2.3.7.3.

(*d*) *Knowledge testing*.—An applicant for an IR shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge subjects.

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required knowledge test on the knowledge subjects listed in item (*c*) above.

(*e*) *Experience and flight instruction*.—An applicant for an IR shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.

(*f*) *Privileges*.—Subject to compliance with the requirements specified in this Part, the privileges of the holder of an IR shall be to pilot an aircraft of the appropriate category under IFR. Before exercising the privileges on multi-engine aircraft the holder of the rating shall have complied with the requirements of (*h*)(3).

Note : Pilots may exercise joint category privileges of the instrument rating on more than one category of aircraft if they have completed the requirements in each category.

(*g*) *Validity*.—Subject to compliance with the requirements specified in this Part, the validity period of an IR is 1 year.

(*h*) *Renewal* :

(1) For the renewal of a single-engine instrument rating the applicant shall within the preceding 12 calendar months, complete a proficiency check on the subjects listed in IS 2.3.8.3.

(2) For the renewal of a multi-engine instrument rating the applicant shall within the preceding 12 calendar months, complete a proficiency check on the subjects listed in IS 2.3.8.3.

(3) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(*i*) *Re-issue*.—If the instrument rating has been expired the applicant shall :

(1) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test ; and

(2) Pass the required skill test on the subjects listed in IS 2.3.8.3.

Experience and Flight Instruction for the IR.

2.3.8.2.—(*a*) Experience.

(1) The applicant for an IR shall hold a pilot license with an aircraft category, and class rating if applicable, for the instrument rating sought.

(2) The applicant shall have completed not less than :

(*i*) 50 hours of cross-country flight time as PIC of aircraft in categories acceptable to the Authority, of which not less than 10 hours shall be in the aircraft category being sought ; and

(*ii*) 40 hours of instrument time in aircraft of which not more than 20 hours, or 30 hours where a flight simulator is used, may be instrument ground time. The ground time shall be under the supervision of an authorised instructor.

(*b*) Flight Instruction.

(1) The applicant for an IR shall have not less than 10 hours of the instrument flight time required in (*e*)(2)(*ii*) while receiving and logging dual instruction in aircraft from an authorised flight instructor.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an instrument rating :

(*i*) Pre-flight procedures, including the use of the flight manual or equivalent document, and appropriate air traffic services documents in the preparation of an IFR flight plan.

(*ii*) Pre-flight inspection, use of checklists, taxiing and pre-take-off checks.

(*iii*) Procedures and manoeuvres for IFR operation under normal, abnormal and emergency conditions covering at least :

(*a*)Transition to instrument flight on take-off ;

(*b*) Standard instrument departures and arrivals ;

(*c*) En-route IFR procedures and navigation ;

(*d*) Holding procedures ;

(*e*) Instrument approaches to specified minima ;

(*f*) Missed approach procedures ; and

(*g*) Landings from instrument approaches ;

(*iv*) In flight manoeuvres and particular flight characteristics.

(3) If the privileges of the instrument rating are to be exercised on multi-engine aircraft, the applicant shall have received dual instrument flight instruction in such an aircraft from an authorised flight instructor. The instructor shall ensure that the applicant has operational experience in the operation of the aircraft solely by reference to instruments with one engine inoperative or simulated inoperative.

(*c*) *Skill*.—The applicant for an IR shall :

(1) Have received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test.

(2) Have demonstrated by passing a skill test the ability to perform the areas of operation described in IS 2.3.8.3 with a degree of competency appropriate to the privileges granted to the holder of an IR, and to :

(*i*) Recognise and manage threats and errors ;

(*ii*) Operate the aircraft within its limitations ;

(*iii*) Complete all manoeuvres with smoothness and accuracy ;

(*iv*) Exercise good judgement and airmanship ;

(*v*) Apply aeronautical knowledge ;

(*vi*) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured ;

(*vii*) Understand and apply crew co-ordination and incapacitation procedures ; and

(*viii*) Communicate effectively with the other flight crewmembers.

(3) Have demonstrated by passing a skill test the ability to operate multi-engine aircraft solely by reference to instruments with one engine inoperative, or simulated inoperative, described in IS 2.3.8.3, if the privileges of the instrument rating are to be exercised on such aircraft.

Instrument Rating-Skill Test and Proficiency Check.

2.3.8.3.—(*a*) The skill test and proficiency check for the instrument rating is included in IS 2.3.8.3.

(*b*) *Circumstances in which an instrument rating is required* : The Authority having issued a pilot licence, shall not permit the holder thereof to act either as pilot-in-command or as co-pilot of an aircraft under instrument flight rules (IFR) unless such holder has received proper authorization from such Authority. Proper authorization shall comprise an instrument rating appropriate to the aircraft category.

2.3.9. INSTRUCTORS FOR PILOT LICENSING

General Require-ments.

2.3.9.1.—(*a*) Applicability.

(1) This Section prescribes the requirements for the issuance of instructor licences, ratings or authorisations, the conditions under which those ratings and authorisations are necessary, and the privileges and limitations on those ratings and authorisations.

(2) The following instructor licences, ratings and authorisations are issued under this part :

(*i*) Flight instructor rating ;

(*ii*) Ground Instructor licence, with basic, advanced and instrument ratings ; and

(*iii*) Instructor Authorisation for Flight Simulation Training.

Flight Instructor Rating.

2.3.9.2.—(*a*) *Age* : The applicant for a flight instructor rating shall be of the appropriate age for the underlying rating to be held.

(*b*) *Medical Fitness* : The applicant for a flight instructor rating shall have a Class 1 medical certificate.

(*c*) *Knowledge* :

(1) Receive and log training from an authorised instructor and pass a flight instructor knowledge test on :

(*i*) The aeronautical knowledge areas for a student, private and commercial pilot license applicable to the aircraft category for which flight instructor privileges are sought ; and

(*ii*) The aeronautical knowledge areas for the instrument rating applicable to the category for which instrument flight instructor privileges are sought.

(2) Meet the requirements for fundamentals of knowledge instruction as listed in 2.2.6. of these regulations.

(*d*) *Experience* : The applicant shall hold a rating with the aircraft category, and if applicable class and/or type rating, that is appropriate to the flight instructor rating sought as follows :

(1) For a flight instructor rating in the aeroplane category – hold either a CPL or ATPL aeroplane category with instrument rating and appropriate class and/or type ratings ;

(2) For a flight instructor rating in the powered-lift category-hold either a CPL or ATPL powered-lift category with instrument rating an as applicable, class or type rating ;

(3) For a flight instructor rating in the helicopter category-hold either a CPL or ATPL helicopter category and any applicable class or type rating ;

(4) For a flight instructor rating the balloon category-hold a CPL balloon category with applicable class rating ;

(5) For a flight instructor rating in the airship category-hold a CPL airship category and any applicable ratings ;

(6) For a flight instructor rating in the glider category-hold a CPL glider category and any applicable ratings ; and

(7) For an instructor instrument rating licence-hold an IR in the appropriate category of aircraft.

(*e*) *Flight Instruction* : Receive flight instruction from an authorised instructor in the areas of :

(1) Flight instructional techniques including demonstration, student practices, recognition and correction of common student errors ; and

(2) Have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

(*f*) *Skill* :

(1) Receive a logbook endorsement from an authorised instructor to indicate that the applicant is proficient on the areas of operation listed in item 2 below, appropriate to the flight instructor rating sought ;

(2) Pass the required skill test that is appropriate to the flight instructor rating sought on the areas of operation in IS 2.3.9.2 in an—

(*i*) Aircraft that is representative of the category of aircraft, and if applicable class and/or type, for the aircraft rating sought ; or

(*ii*) Approved flight simulation training device that is representative of the category, and if applicable class and/or type of aircraft for the licence and rating sought, and used in accordance with an approved course at an ATO certified under Part 3 of these regulations.

(*g*) *Privileges* : limitations and qualifications.

(1) A flight instructor is authorised within the limitations of that person's flight instructor rating, and pilot license and ratings, to give training and endorsements that are required for, and relate to :

(*i*) A student pilot authorisation ;

(*ii*) A pilot license ;

(*iii*) A flight instructor rating ;

(*iv*) A ground instructor licence ;

(*v*) An aircraft category rating ;

(*vi*) An aircraft class rating ;

(*vii*) An instrument rating ;

(*viii*) A proficiency check or recency of experience requirement ;

(*ix*) A knowledge test ; and

(*x*) A skill test.

(2) The applicant, in order to carry out instruction for the multi-crew pilot licence, shall have also met all the instructor qualification requirements.

(*h*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of flight instructor rating is 2 years.

(*i*) *Renewal* : A flight instructor rating that has not expired may be renewed for an additional 24 calendar months if the holder ;

(1) Passes a skill test for—

(*i*) Renewal of the flight instructor rating ; or

(*ii*) An additional flight instructor rating ; or

(2) Presents to an Authority inspector—

(*i*) A record of training students that shows during the preceding 24 calendar months the flight instructor has endorsed at least five students for a skill test for a license or rating, and at least 80 percent of those students passed that test on the first attempt ;

(*ii*) A record that shows that within the preceding 24 calendar months, service as a company check pilot, chief flight instructor, company check airman, or flight instructor in a Part 9 operation, or in a position involving the regular evaluation of pilots ; or

(*iii*) A graduation certificate showing that the pilot has successfully completed an approved flight instructor refresher course consisting of ground training or flight training, or both, within the 90 days preceding the expiration month of his or her flight instructor rating.

(3) If a flight instructor accomplishes the renewal requirements within the 90 days preceding the expiration month of his or her flight instructor rating.

(*i*) The Authority shall consider that the flight instructor accomplished the renewal requirement in the month due ; and

(*ii*) The Authority shall renew the current flight instructor rating for an additional 24 calendar months from its expiration date.

(4) A flight instructor may accomplish the skill test required by this sub-section in an approved course conducted by an ATO certified under Part 3.

(*j*)*Reissue* : If the flight instructor rating has expired, the applicant shall :

(1) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test ; and

(2) Pass the prescribed skill test.

(*k*) *Additional flight instructor rating* : An applicant for an additional flight instructor rating shall meet the requirements listed in 2.3.9.2 of these regulations that apply to the flight instructor rating sought.

(*l*) *Flight Instructor Records* : A flight instructor shall—

(1) Sign the logbook of each person to whom that instructor has given flight training or ground training.

(2) Maintain a record in a logbook or separate document that contains the following—

(*i*) The name of each person whose logbook or student pilot licence that instructor has endorsed for solo flight privileges, and the date of the endorsement ; and

(*ii*) The name of each person that instructor has endorsed for a knowledge test or skill test, and a record of the kind of test, the date, and the results.

(3)Retain the records required by this subjection for at least 3 years.

(*m*) *Flight Instructor Limitations and Qualifications* : The holder of a flight instructor rating shall observe the following limitations and qualifications.

(1) *Hours of training* : In any 24-consecutive-hour period, a flight instructor may not conduct more than 8 hours of flight training.

(2) *Required licence and ratings* : A flight instructor may not conduct flight training in any aircraft for which the flight instructor does not hold a pilot license and flight instructor rating with the applicable category and if applicable class or type rating.

(3) For instrument flight training or for training for a type rating not limited to VFR, an appropriate instrument rating on his or her flight instructor rating and pilot license.

(4) *Limitations on endorsements*.— A flight instructor may not endorse the following :

(*i*) Student pilot's license or logbook for solo flight privileges, unless that flight instructor has—

(*a*) Given that student the flight training required for solo flight privileges required by this subpart ;

(*b*) Determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student's logbook that the instructor considers necessary for the safety of the flight ;

(*c*) Given that student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown ; and

(*d*) Endorsed the student pilot's logbook for the specific make and model aircraft to be flown.

(*ii*) Student pilot's license and logbook for a solo cross country flight, unless that flight instructor has determined that—

(*a*) The student's flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight ; and

(*b*) The student has the appropriate solo cross country endorsement for the make and model of aircraft to be flown.

(*iii*) Student pilot's license and logbook for solo flight in a Class B airspace area or at an airport within Class B airspace unless that flight instructor has—

(*a*) Given that student ground and flight training in that Class B airspace or at that airport ; and

(*b*) Determined that the student is proficient to operate the aircraft safely.

(*iv*) Logbook of a pilot for a flight review, unless that instructor has conducted a review of that pilot in accordance with the requirements 8.4.1.11(*a*)(3) of these regulations ; or

(*v*) Logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of 8.4.1.10(*b*) of these regulations.

(5) *Training in a multiengine aeroplane or a helicopter*.—A flight instructor may not give training required for the issuance of a license or rating in a multiengine aeroplane or a helicopter, unless that flight instructor has at least 5 flight hours of PIC time in the specific make and model of multiengine aeroplane or helicopter, as appropriate.

(6) Qualifications of the flight instructor for training first-time flight instructor applicants :

(*i*) No flight instructor may provide instruction to another pilot who has never held a flight instructor rating unless that flight instructor—

(*a*) Holds a current ground or flight instructor rating with the appropriate rating, has held that license for at least 24 months, and has given at least 40 hours of ground training ; or

(*b*) Holds a current ground or flight instructor rating with the appropriate rating, and has given at least 100 hours of ground training in a course which has been approved by the Authority.

(*c*) Meet the requirements for fundamentals of knowledge instruction prescribed in 2.2.6 of these regulations.

(*d*) For training in preparation for an aeroplane or helicopter rating, has given at least 200 hours of flight training as a flight instructor.

(*e*) For training in preparation for a glider rating, has given at least 80 hours of flight training as a flight instructor.

(7) *Prohibition against Self Endorsements*. —A flight instructor may not make any self-endorsement for a license, rating, flight review, authorisation, operating privilege, skill test, or knowledge test that is required by Part 2 of these regulations.

(8) *Category II and Category III instructions*.—A flight instructor may not give training in Category II or Category III operations unless the flight instructor has been trained and tested in Category II or Category III operations as applicable.

(9) The Authority having issued a pilot licence, shall not permit the holder thereof to carry out flight instruction required for the issue of a pilot licence or rating, unless such holder has received proper authorization from the Authority. Proper authorization shall comprise :

(*i*) A flight instructor rating on the holder's licence ; or

(*ii*) The Authority to act as an agent of an approved organization authorized by the Authority to carry out flight instruction ; or

(*iii*) A specific authorization granted by the Authority which issued the licence.

Flight Instructor: Skill Test and Proficiency Check.

2.3.9.3.—(*a*) The skill test and proficiency check for flight instructor ratings in the categories of aeroplane, helicopter, powered-lift, airship, balloon, and glider, as well as instrument ratings (aeroplane, helicopter, and powered-lift) and additional type ratings are included in IS 2.3.9.2.

Instructor Authorisation for Flight Simulation Training.

2.3.9.4.—(*a*) Current and former holders of professional pilot licenses, having instructional experience can apply for an authorisation to provide flight instruction in a flight simulation training device, provided the applicant has at least 2 years experience as instructor in synthetic flight trainers.

(1) *Skill* : The applicant shall have demonstrated in a skill test, in the category and in the class or type of aircraft for which instructor authorisation privileges are sought, the ability to instruct in those areas in which ground instruction is to be given.

(2) *Privileges* : Subject to compliance with the requirements specified in this Part, the privileges of the holder of an authorisation are to carry out synthetic flight training instruction for the issue of a class or type rating in the appropriate category of aircraft.

(3) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of an instructor authorisation for flight simulation training is 2 years.

Ground Instructor Authorisation.

2.3.9.5.—(*a*) *Age* : The applicant for a ground instructor licence shall be at least 18 years of age.

(*b*) *Knowledge* :

(1) Receive and log training from an authorised instructor and pass a knowledge test on the aeronautical knowledge areas appropriate to the aircraft category, for the licence and ratings below as applicable—

(*i*) For a basic rating, the knowledge for a student and private pilot licence as listed in this Part ;

(*ii*) For an advanced rating, the student, private, commercial and airline transport pilot knowledge areas as listed in this Part.

(*iii*) For an instrument rating, the knowledge for the instrument rating as listed in this Part.

(2) Meet the requirements of for fundamentals of knowledge instructing as listed in 2.2.6 of these regulations.

(*c*) *Privileges* : The holder of a ground instructor licence may exercise the privileges appropriate to the licence and rating held.

(1) A person who holds a ground instructor licence with a basic rating is authorised to provide—

(*i*) Ground training in the aeronautical knowledge areas required for the issuance of a student pilot authorisation or private pilot license or associated ratings ;

(*ii*) Ground training required for a private pilot flight review ; and

(*iii*) A recommendation for a knowledge test required for the issuance of a private pilot license.

(2) A person who holds a ground instructor licence with an advanced rating is authorised to provide—

(*i*) Ground training in the aeronautical knowledge areas required for the issuance of any license or rating ;

(*ii*) Ground training required for any flight review ; and

(*iii*) A recommendation for a knowledge test required for the issuance of any license.

(3) A person who holds an instrument ground instructor rating is authorised to provide—

(*i*) Ground training in the aeronautical knowledge areas required for the issuance of an instrument rating ;

(*ii*) Ground training required for an instrument proficiency check ; and

(*iii*) A recommendation for a knowledge test required for the issuance of an instrument rating.

(4) A person who holds a ground instructor license is authorised, within the limitations of the licence and ratings on the ground instructor license, to endorse the logbook or other training record of a person to whom the holder has provided the training or recommendation specified in (1) through (3) of this subsection.

(5) *Validity*.—The validity period for a ground instructor licence is 2 years.

(6) *Renewal*.—The applicant for renewal of a ground instructor licence shall provide to the Authority satisfactory evidence of at least 3 months service as a ground instructor within the past 12 months.

(7) *Reissue*.—If the ground instructor licence has expired, the applicant for reissuance must complete refresher training acceptable to the Authority and receive an endorsement from a licensed ground or flight instructor certifying that the person has demonstrated satisfactory proficiency with the standards prescribed in this part for the licence and rating.

(*d*) *Currency Requirements* :

(1) The holder of a ground instructor license may not perform the duties of a ground instructor unless, within the preceding 12 months—

(*i*) The person has served for at least 3 months as a ground instructor ; or

(*ii*) The person has received an endorsement from an authorised ground or flight instructor certifying that the person has demonstrated satisfactory proficiency with the standards prescribed in this part for the authorisation and rating.

2.3.10. Designated Pilot Examiners

General Require-ments.

2.3.10.1.—(*a*) *Age* : An applicant for a designated pilot examiner shall be at least 21 years of age.

(*b*) *Medical* : An applicant for a designated pilot examiner shall have a Class 1 medical certificate.

(*c*) *General Eligibility* : An applicant for a designated pilot examiner shall :

(1) Hold at least the licence and/or class/type ratings as applicable for which examining authority is sought ;

(2) Hold at least the flight instructor ratings for which examining authority is sought or be serving in a comparable position as an air operator check airman or check pilot or comparable position in an Approved Training Organisation ;

(3) Have a reputation for integrity and dependability in the industry and the community ;

(4) Have a good record as a pilot and flight instructor in regard to accidents, incidents, and violations ; and

(5) Have pilot and instructor licence/ratings that have never been revoked for falsification or forgery.

(*d*) *Knowledge* : The applicant for a designated pilot examiner shall pass a pre-designation knowledge test in the areas appropriate to the category of aircraft for which designation is sought.

(*e*) *Skill Test* : The applicant for a designated pilot examiner shall pass a skill test conducted by an inspector of the Authority who holds a current and valid licence with appropriate category, and if applicable class and type ratings, in the areas of operation contained in IS 2.3.10.1.

(*f*) *Maintaining Currency* : After designation, a designated pilot examiner shall maintain currency by :

(1) Attending initial and recurrent training provided by the Authority ; and

(2) Maintain a current and valid :

(*i*) Pilot licence, and if applicable, class/type ratings appropriate to the designation ;

(*ii*) Flight instructor rating and ratings applicable to the designation ; and

(*iii*) Class I medical certificate.

(*g*) *Privileges* : Subject to compliance with the requirements specified in this Part, the privileges of the examiner's designation are to conduct skill tests and proficiency checks for a licence and rating(s) as listed on the designated pilot examiner's certificate of designation and identification card.

(*h*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of an examiner's designation is 3 years.

(*i*) *Renewal* :

(1) Renewal will be at the discretion of the Authority.

(2) An applicant for renewal shall pass the appropriate skill test on the areas of operation listed in IS 2.3.10.1.

(*j*) *Additional Designations* : When the Authority deems it necessary for a designated pilot examiner to receive additional designations, the designated pilot examiner :

(1) Shall meet all the requirements in this Part for the designation ;

(2) Need not take an additional knowledge test provided the designation is within the same aircraft category.

Skill Test for Designated Pilot Examiners.

2.3.10.2.—(*a*) The requirements for the designation of a pilot examiner are included in IS 2.3.10.1.

Experience Requirements for Private Pilot Examiner (PPE).

2.3.10.3.—(*a*) *Experience* : PPE-Aeroplane Category. The applicant shall have at least :

(1) A CPL(A), appropriate class rating(s) and in IR(*A*) ;

(2) A valid flight instructor rating with an aeroplane category and appropriate class rating(s).

(3) 2,000 hours as PIC which includes at least :

(*i*) 1,000 hours in aeroplanes, of which 300 hours were accrued within the past year ;

(*ii*) 300 hours in the class of airplane for which the designation is sought ; and

(*iii*) 100 hours in aeroplanes at night.

(4) 500 hours as a flight instructor in aeroplanes which includes at least 100 hours of flight instruction given in the class of aeroplane appropriate to the designation sought.

(*b*) *Experience* : PPE-Helicopter Category. The applicant shall have at least :

(1) A CPL(H), appropriate class rating(s).

(2) A valid flight instructor rating with a helicopter category and appropriate class rating(s).

(3) 1,000 hours as PIC which includes at least :

(*i*) 500 hours in helicopters, of which 100 hours were accrued within the past year ; and

(*ii*) 250 hours in helicopters as appropriate for the designation sought.

(4) 200 hours as a flight instructor in helicopters, as appropriate for the designation sought.

(*c*) *Experience* : PPE-Powered-Lift Category. The applicant shall have at least :

(1) A CPL powered-lift category with an instrument powered-lift rating.

(2) A valid flight instructor rating with a powered-lift category.

(3) 2,000 hours as PIC which includes at least :

(*i*) 1,000 hours in powered-lift, of which 300 hours were accrued within the past year ; and

(*ii*) 100 hours in powered-lift at night.

(4) 500 hours as a flight instructor in powered-lift.

(*d*) *Experience*: PPE-Airship Category. The applicant shall have at least :

(1) A CPL airship category and any applicable class rating(s).

(2) A valid flight instructor rating with an airship category and any applicable class rating(s).

(3) 1,000 hours as PIC which includes at least :

(*i*) 500 hours in airships, of which 200 hours were accrued within the past year ; and

(*ii*) 50 hours in airships at night.

(4) 100 hours as a flight instructor in airships.

(*e*) *Experience* : PPE—Balloon Category. The applicant shall have at least :

(1) A CPL balloon category and applicable class rating(s).

(2) A valid flight instructor rating with a balloon category and appropriate class rating(s).

(3) 200 hours as PIC which includes at least :

(*i*) 100 hours in balloons ; and

(*ii*) 20 hours in balloons in the class for which the designation is sought within the past year, including 10 flights in balloons of at least 30 minutes duration each.

(4) 50 hours as a flight instructor in balloons in the class for which the designation is sought, of which 10 hours were accrued within the past year.

(*f*) *Experience* : PPE—Glider Category. The applicant shall have at least :

(1) A CPL glider category rating.

(2) A valid flight instructor rating with a glider category rating.

(3) 500 hours as PIC which includes at least :

(*i*) 200 hours in gliders ; and

(*ii*) 10 hours in gliders within the past year that includes at least 10 flights in gliders.

(4) 100 hours as a flight instructor in gliders.

Experience Requirements for Commercial and Instrument Rating Pilot Examiner (CIRE).

2.3.10.4.—(*a*) *Experience* : CIRE—Aeroplane Category. The examiner applicant shall have at least :

(1) A commercial pilot licence with an aeroplane category rating, appropriate class rating(s) and an Instrument-Aeroplane rating.

(2) A valid flight instructor certificate with an aeroplane category rating, the appropriate class rating(s) and an Instrument-Aeroplane rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 1,000 hours in aeroplanes, of which 300 hours were accrued within the past year ;

(*ii*) 500 hours in the class of aeroplane for which the designation is sought ;

(*iii*) 100 hours at night in aeroplanes ;

(*iv*) 100 hours if instrument flight time in actual or simulated conditions ; and

(*v*) For authority to conduct skill tests in large or turbine-powered aeroplanes—

(*A*) 300 hours in large or turbine-powered aeroplanes, of which 50 hours are in the type of aeroplane for which designation is sought, and

(*B*) 25 hours for each additional type of large aeroplane for which designation is sought ;

(4) 500 hours as a flight instructor in aeroplanes, which shall include at least :

(*i*) 100 hours of flight instruction given in the class of aeroplane applicable to the designation sought ; and

(*ii*) 250 hours of instrument flight instruction, of which 200 hours were given in aeroplanes.

(*b*) *Experience* : CIRE—Helicopter Category. The examiner applicant shall have at least :

(1) A commercial pilot licence with a helicopter category rating, appropriate class rating(s) and an Instrument-Helicopter rating.

(2) A valid flight instructor certificate with a helicopter category rating, the appropriate class rating(s) and an Instrument-Helicopter rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 500 hours in helicopters, of which 100 hours were accrued within the past year.

(*ii*) 500 hours in the class of aeroplane for which the designation is sought.

(*iii*) 100 hours if instrument flight time in actual or simulated conditions.

(*iv*) For authority to conduct skill tests in large or turbine-powered aeroplanes—

(*A*)100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought ; and

(*B*) 25 hours for each additional type of large helicopter for which designation is sought.

(*v*) 250 hours as a flight instructor in helicopters, which include at least—

(*A*) 100 hours of flight instruction given in the helicopters ; and

(*B*) 50 hours of instrument flight instruction in helicopters.

(*c*) *Experience* : CIRE—Powered-Lift Category. The examiner applicant shall have at least :

(1) A commercial pilot licence with a powered-lift category rating, any applicable class rating(s) and an Instrument–Powered-lift rating.

(2) A valid flight instructor certificate with a powered-lift category rating, any applicable class rating(s) and an Instrument-Powered-lift rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 1,000 hours in powered-lifts, of which 300 hours were accrued within the past year ;

(*ii*) 100 hours at night in powered-lifts ;

(*iii*) 100 hours if instrument flight time in actual or simulated conditions ; and

(*iv*) For authority to conduct skill tests in large or turbine-engine powered-lifts—

(*A*) 300 hours in large or turbine-engine powered-lifts, of which 50 hours are in the type of powered-lift for which designation is sought, and

(*B*) 25 hours for each additional type of large aeroplane for which designation is sought.

(*d*) 500 hours as a flight instructor in powered-lifts, which shall include at least :

(1) 250 hours of instrument flight instruction, of which 200 hours were given in powered-lifts.

Experience Require-ments for Commercial Pilot Examiners (CE).

2.3.10.5.—(*a*) *Experience* : CE-Helicopter Category. The examiner applicant shall have at least :

(1) A commercial pilot licence with a helicopter category rating.

(2) A valid flight instructor certificate with a helicopter category rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 500 hours in helicopters, of which 100 hours were accrued within the past year ;

(*ii*) For authority to conduct skill tests in large helicopters—

(*A*) 100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought ; and

(*B*) 25 hours for each additional type of large helicopter for which designation is sought.

(4) 250 hours as a flight instructor in helicopters, which shall include at least :

(*i*) 50 hours of instrument flight instruction in helicopters.

(*b*) *Experience* : CE-Airship Category. The applicant shall have at least :

(1) A CPL with airship category rating and any applicable class rating(s) ;

(2) A valid flight instructor rating with an airship category and any applicable class rating(s).

(3) 1,000 hours as PIC which includes at least :

(*i*) 500 hours in airships, of which 200 hours were accrued within the past year ; and

(*ii*) 50 hours in airships at night.

(4) 100 hours as a flight instructor in airships.

(*c*) *Experience* : CE-Balloon Category. The applicant shall have at least :

(1) A CPL balloon category and applicable class rating(s).

(2) A valid flight instructor rating with a balloon category and applicable class rating(s).

(3) 200 hours as PIC which shall include at least :

(*i*) 100 hours in balloons ; and

(*ii*) 20 hours in balloons in the class for which the designation is sought within the past year, including 10 flights in balloons of at least 30 minutes duration each.

(4) Held a commercial pilot licence with balloon category rating and applicable class rating for at least 1 year prior to designation.

(5) 50 hours as a flight instructor in balloons in the class for which the designation is sought, of which 10 hours were accrued within the past year.

(*d*) *Experience* : CE-Glider Category. The applicant shall have at least :

(1) A CPL with glider category rating.

(2) A valid flight instructor rating with a glider category rating.

(3) 500 hours as PIC which includes at least :

(*i*) 250 hours in gliders ; and

(*ii*) 20 hours in gliders within the past year that includes at least 50 flights in gliders.

(4) 200 hours as a flight instructor, including 100 hours of flight instruction given in gliders.

Experience Requirements for Airline Transport Pilot (ATPL) Examiners (ATPE).

2.3.10.6.—(*a*) *Experience* : ATPE—Aeroplane Category. The examiner applicant shall have at least :

(1) An ATPL with an aeroplane category rating, appropriate class rating(s) and an Instrument-Aeroplane rating.

(2) A valid flight instructor certificate with an aeroplane category rating, the appropriate class rating(s) and an Instrument-Aeroplane rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 1,500 hours in aeroplanes, of which 300 hours were accrued within the past year.

(*ii*) 500 hours in the class of aeroplane for which the designation is sought.

(*iii*) 100 hours at night in aeroplanes.

(*iv*) 200 hours in complex aeroplanes.

(*v*) 100 hours of instrument flight time in actual or simulated conditions.

(*vi*) For authority to conduct skill tests in large or turbine-powered aeroplanes :

(*a*) 300 hours in large or turbine-powered aeroplanes, of which 50 hours are in the type of aeroplane for which designation is sought ; and (*b*) 25 hours for each additional type of large aeroplane for which designation is sought.

(4) 500 hours as a flight instructor in aeroplanes, which shall include at least :

(*i*) 100 hours of flight instruction given in the class of aeroplane applicable to the designation sought ;

(*ii*) 250 hours of instrument flight instruction, of which 200 hours were given in aeroplanes ; and

(*iii*) 150 hours flight instruction given for either a CPL(A) or ATPL(A) or an IR(A).

(*b*) *Experience* : ATPE-Helicopter Category. The examiner applicant shall have at least :

(1) An ATPL with a helicopter category rating, appropriate class rating(s) and an Instrument-Helicopter rating.

(2) A valid flight instructor certificate with a helicopter category rating, the appropriate class rating(s) and an Instrument-Helicopter rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 1,200 hours in helicopters, of which 100 hours were accrued within the past year ;

(*ii*) 100 hours if instrument flight time in actual or simulated conditions ; and

(*iii*) For authority to conduct skill tests in large helicopters—

(*a*) 100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought ; and

(*b*) 25 hours for each additional type of large helicopter for which designation is sought.

(4) 250 hours as a flight instructor in helicopters, which include at least :

(*i*) 100 hours of flight instruction given in the helicopters ; and

(*ii*) 50 hours of instrument flight instruction in helicopters.

(*c*) *Experience* : ATPE-Powered-Lift Category. The examiner applicant shall have at least :

(1) An ATPL with a powered-lift category rating, any applicable class rating(s) and an Instrument-Powered-lift rating.

(2) A valid flight instructor certificate with a powered-lift category rating, any applicable class rating(s) and an Instrument-Powered-lift rating.

(3) 2,000 hours as PIC, which shall include at least :

(*i*) 1,500 hours in powered-lifts, of which 300 hours were accrued within the past year ;

(*ii*) 100 hours at night in powered-lifts ;

(*iii*) 100 hours if instrument flight time in actual or simulated conditions ; and

(*iv*) For authority to conduct skill tests in large or turbine-engine powered-lifts—

(*a*) 300 hours in large or turbine-engine powered-lifts, of which 50 hours are in the type of powered-lift for which designation is sought ; and

(*b*) 25 hours for each additional type of large aeroplane for which designation is sought.

(4) 500 hours as a flight instructor in powered-lifts, which shall include at least :

(*i*) 250 hours of instrument flight instruction, of which 200 hours were given in powered-lifts ; and

(*ii*) 150 hours flight instruction given for either a CPL-powered-lift, ATPL -powered-lift or IR-powered-lift.

Experience Requirements for Flight Instructor Examiner (FIE).

2.3.10.7.—(*a*) The examiner applicant shall have at least :

(1) The requirements for a commercial examiner or a commercial instrument rating examiner designation, as appropriate for the category and class of aircraft pertinent to the FIE designation sought ; and.

(2) Have held a Commercial Examiner or Commercial and Instrument Rating Examiner designation for at least a year prior to designation as a FIE.

2.4. FLIGHT ENGINEER LICENCE, RATINGS, INSTRUCTORS AND DESIGNATED FLIGHT ENGINEER EXAMINERS

Applicability.

2.4.1.—(*a*) This section prescribes the requirements for the issue, renewal and re-issue of a flight engineers licence and ratings and for designated flight engineer examiners.

General Rule Concerning Flight Engineer Licences and Ratings.

2.4.2.—(*a*) A person shall not act as a flight engineer of an aircraft registered in Nigeria unless a valid licence or a validation certificate is held showing compliance with the specifications of this Part 2 and appropriate to the duties to be performed by that person.

(*b*) for the purpose of training, testing or specific special purpose non-revenue, non-passenger carrying flights, special authorisation may be provided in writing to the licence holder by the Authority in place of issuing the class or type rating in accordance with this Part. This authorisation will be limited in validity to the time needed to complete the specific flight.

(*c*) (1) An applicant shall, before being issued with a flight engineer licence and class rating, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence or rating.

(2) An applicant for a flight engineer licence shall demonstrate such requirements for knowledge and skill as are specified for the licence, in a manner determined by the Authority.

(*d*) An applicant for renewal or re-issue of an FE licence and class rating shall meet the requirements as are specified for the licence and rating in this Part.

Authority to Act as a Flight Crew member.

2.4.3.—(*a*) A person shall not act as a flight crewmember of an aircraft registered in Nigeria unless a valid licence or validation certificate is held showing compliance with the specifications of Part 2 and appropriate to the duties to be performed by that person**.**

(*b*) No person may act as a FE of an aircraft unless that person holds the appropriate FE licence and class rating for the aircraft to be flown.

2.4.4. Flight Engineer licence, Class Rating, and Experience Requirements

Flight Engineer Licence.

2.4.4.1.—(*a*) *Age*.—The applicant for a flight engineer licence and class rating shall be not less than 18 years of age.

(*b*) *Medical*.—The applicant for a flight engineer licence and class rating shall have a Class 2 medical certificate.

(*c*) *Knowledge*.—The applicant for a flight engineer licence and class rating shall receive and log ground training from an authorised instructor on the following subjects :

(1) Air law :

(*i*) Rules and regulations relevant to the holder of a flight engineer licence; rules and regulations governing the operations of civil aircraft pertinent to the duties of a flight engineer.

(2) Aircraft general knowledge :

(*i*) Basic principles of power plants, gas turbines and/or piston engines; characteristics of fuels, fuel systems including fuel control; lubricants and lubrication systems; afterburners and injection systems; function and operation of engine ignition and starter systems ;

(*ii*) Principles of operation; handling procedures and operating limitations of aircraft power plants; effects of atmospheric conditions on engine performance ;

(*iii*) Airframes, flight controls, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life; identification of structural damage and defects ;

(*iv*) Ice and rain protection systems ;

(*v*) Pressurisation and air-conditioning systems; oxygen systems ;

(*vi*) Hydraulic and pneumatic systems ;

(*vii*) Basic electrical theory ; electric systems (AC and DC) ; aircraft wiring systems ; bonding and screening ;

(*viii*) Principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, displays and avionics ;

(*ix*) Limitations of appropriate aircraft ;

(*x*) Fire protection; detection, suppression and extinguishing systems ;

(*xi*) Use and serviceability checks of equipment and systems of appropriate aircraft.

(3) Flight performance and planning :

(*i*) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance ; mass and balance calculations ; and

(*ii*) Use and practical application of performance data including procedures for cruise control.

(4) Human performance :

(*i*) Human performance and CRM relevant to the flight engineer, including principles of threat and error management.

(5) Operational procedures :

(*i*) Principles of maintenance procedures for the maintenance of airworthiness ; defect reporting ; pre-flight inspections ; precautionary procedures for fuelling and use of external power ; installed equipment and cabin systems.

(*ii*) Normal, abnormal and emergency procedures.

(*iii*) Operational procedures for carriage of freight and dangerous goods.

(6) Principles of flight :

(*i*) Fundamentals of aerodynamics.

(7) Radiotelephony :

(*i*) Radiotelephony procedures and phraseology.

(8) Navigation :

(*i*) Fundamentals of navigation ;

(*ii*) Principles and operation of self-contained systems.

(9) Meteorology :

(*i*) Operational aspects of meteorology.

(*d*) *Knowledge Testing*.—The applicant for a FE shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge subjects ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required knowledge test.

(*e*) Experience.

(1) The applicant for a flight engineer licence and class rating shall have completed under the supervision of a person accepted by the Authority for that purpose, not less than 100 hours of flight time in the performance of the duties of a flight engineer, of which 50 hours may have been completed in a flight simulation training device approved by the Authority. This experience shall have been obtained :

(*i*) On an aeroplane for which a flight engineer is required ; and

(*ii*) On an aeroplane that has at least three engines that are rated at least 800 horsepower each or the equivalent in turbine engine powered aircraft.

(2) The holder of a CPL/IR(A) or ATPL(A) may be credited with 30 hours towards the 100 hours of flight time.

(3) The applicant shall have operational experience in the performance of the duties of a flight engineer, under the supervision of a flight engineer accepted by the Authority for that purpose, in at least the following areas :

(*i*) Normal procedures :

(*a*) Pre-flight inspections.

(*b*) Fuelling procedures, fuel management.

(*c*) Inspection of maintenance documents.

(*d*) Normal flight deck procedures during all phases of flight.

(*e*) Crew coordination and procedures in case of crew incapacitation.

(*f*) Defect reporting.

(*ii*) Abnormal and alternate (standby) procedures :

(*a*) Recognition of abnormal functioning of aircraft systems.

(*b*) Use of abnormal and alternate (standby) procedures.

(*iii*) Emergency procedures :

(*a*) Recognition of emergency conditions.

(*b*) Use of appropriate emergency procedures.

(*f*) *Skill*.—The applicant for a flight engineer licence and class rating shall :

(1) Have received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test ; and

(2) Have demonstrated by passing the required skill test, the ability to perform as flight engineer of an aircraft, the duties and procedures described *i*(*c*) above with a degree of competency appropriate to the privileges granted to the holder of a flight engineer licence, and to—

(*i*) Use aircraft systems within the aircraft's capabilities and limitations ;

(*ii*) Exercise good judgement and airmanship ;

(*iii*) Apply aeronautical knowledge ;

(*iv*) Perform all the duties as part of an integrated crew with the successful outcome never in doubt ; and

(*v*) Communicate effectively with the other flight crewmembers ;

(*vi*) Recognize and manage threats and errors.

(3) Requirements for the skill test are given at IS 2.4.4.4.

(4) The use of a flight simulation training device for training or testing any of the required manoeuvres shall be appropriate to the task and approved by the Authority.

(*g*) *Privileges*.

(1) Subject to compliance with the requirements specified in this Part, the privileges of the holder of a flight engineer licence and class rating shall be to act as flight engineer of any type of aircraft on which the holder has demonstrated a level of knowledge and skill.

(2) The types of aircraft on which the holder of a flight engineer licence is authorized to exercise the privileges of that licence, shall be either entered on the licence or recorded elsewhere in a manner acceptable to the Authority.

(*h*) *Validity*.—Subject to compliance with the requirements specified in this Part, the validity period of the flight engineer licence and class rating is 5 years.

(*i*) *Renewal*.—The Flight Engineer Licence may be renewed by presenting to the Authority evidence of successfully passing a proficiency check on the areas of operation listed in IS: 2.4.4.4.

(*j*) *Reissue*.—If the Flight Engineer Licence has expired, the applicant shall have received refresher training acceptable to the Authority.

Flight Engineer Class Ratings.

2.4.4.2.—(*a*) The Authority may issue the following class ratings to be placed on a flight engineer's licence when the applicant completes the requirements in this Part for the rating sought :

(1) Reciprocating engine powered ;

(2) Turbopropeller powered ; and

(3) Turbojet powered.

(*b*) *Additional ratings*.—To be eligible for an additional class rating, an applicant shall :

(1) Successfully complete an approved flight engineer training course that is appropriate to the additional class rating sought ;

(2) Pass the knowledge test that is appropriate to the class for which an additional rating is sought ; and

(3) Pass the skill test that is appropriate to the class for which an additional rating is sought.

Recent Experience Requirements.

2.4.4.3.—(*a*) No person holding a flight engineer licence and class rating shall exercise the privileges of the flight engineer licence unless he/she has completed within the past 6 calendar months—

(1) At least 50 hours of flight time as a flight engineer, or

(2) Completed a proficiency check.

2.4.4.4.—(*a*) The requirements for the skill test and proficiency check for the flight engineer licence are included in IS 2.4.4.4.

Flight Engineer : Skill Test and Proficiency Check.

2.4.5. Instructors for Flight Engineer Licences

Require-ments for Flight Engineer Instructor Rating and Class Rating.

2.4.5.1.—(*a*) *Age* : An applicant for a flight engineer instructor rating and class rating shall be at least 18 years of age.

(*b*) *Medical* : An applicant for a flight engineer instructor rating shall hold a Class 2 medical certificate.

(*c*) *Knowledge* :

(1) An applicant for a Flight engineer instructor rating shall have met the instructor requirements in 2.2.6 of this part ; and

(2) Any additional requirements as may be specified by the Authority.

(*d*) *Experience* : The applicant for a Flight engineer instructor rating and class rating shall hold at least a current and valid flight engineer licence and class rating for which the instructor licence is sought and have a minimum of 1,500 hours flight time as a flight engineer.

(*e*) *Flight Instruction.* : Received flight instruction from an authorised instructor in the areas of :

(1) Flight instructional techniques including demonstration, student performance, student practices, recognition and correction of common student errors ; and

(2) Have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

(*f*) *Privileges* : The privileges of a Flight engineer instructor rating and class rating are to give flight and ground instruction to flight engineer licence applicants and to endorse those applicants for a knowledge or skill test as applicable.

(*g*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of the Flight engineer instructor rating is 2 years.

(*h*) *Renewal* : A Flight engineer instructor rating that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that he/she has within the past 12 months preceding the expiry date—

(1) Received refresher training acceptable to the Authority ; or

(2) Conducted at least one of the following parts of an approved course for a flight engineer licence or class rating :

(*i*) One simulator session of at least 3 hours ; or

(*ii*) One flight exercise of at least 1 hour including at least 2 take-offs and landings.

(*i*) *Reissue* : If the Flight engineer instructor rating has expired, the applicant shall :

(1) Have received refresher training acceptable to the Authority ; and

(2) Pass a skill test on the areas of operation listed in IS 2.4.4.2.

Instructor Authorisation for Flight Simulation Training.

2.4.5.2.—(*a*) Current or former holders of flight engineer licences, having instructional experience may apply for an authorisation to provide flight instruction in a flight simulation training device, provide the applicant has at least 2 years experience as instructor in flight simulation training devices.

(1) *Skill* : The applicant shall have demonstrated in a skill test, in the category and in the class or type of aircraft for which instructor authorisation privileges are sought, the ability to instruct in those areas in which ground instruction is to be given.

(2) *Privileges* : Subject to compliance with the requirements specified in this Part, the privileges of the holder of an authorisation are to carry out synthetic flight training instruction for the issue of a class or type rating in the appropriate category of aircraft.

(3) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of an instructor authorisation for synthetic flight training is 2 years.

2.4.6. DESIGNATED FLIGHT ENGINEER EXAMINERS

Requirements.

2.4.6.1.—(*a*) *Age* : An applicant for a designated flight engineer examiner shall be at least 21 years of age.

(*b*) *Medical* : An applicant for a designated flight engineer examiner shall hold a Class 2 medical certificate.

(*c*) *Eligibility* : An applicant for a designated flight engineer examiner shall :

(1) Hold at least the flight engineer licence and class rating for which examining authority is sought.

(2) Have a minimum of 1,500 hours flight time as a flight engineer.

(3) Have held a Flight engineer instructor rating or company flight engineer check airman authorisation for preferably at least 1 year.

(4) Have a reputation for integrity and dependability in the industry and the community.

(5) Have a good record as a flight engineer in regard to accidents, incidents, and violations.

(6) Have flight engineer licence/class ratings and Flight engineer instructor rating or check airman authorisation that have never been revoked for falsification or forgery.

(*d*) *Knowledge* : The applicant for a designated flight engineer examiner shall pass a pre-designation knowledge test in the areas appropriate to the licence/class rating for which designation is sought.

(*e*) *Skill test* : The applicant for a designated flight engineer examiner shall pass a skill test on the items in IS 2.4.6.2 conducted by an inspector of the Authority who holds a current and valid flight engineer licence with appropriate class rating.

(*f*) *Maintaining currency* : After designation, a designated flight engineer examiner shall maintain currency by :

(1) Attending initial and recurrent training provided by the Authority ; and

(2) Maintain a current and valid :

(*i*) Flight engineer licence and applicable class rating ; and

(*ii*) Class 1 medical certificate.

(*g*) *Privileges* : Subject to compliance with the requirements specified in this Part, the privileges of the flight engineer examiner's designation are to conduct skill tests and proficiency checks for a flight engineer licence and applicable class rating as listed on the designated flight examiner's certificate of designation and identification card.

(*h*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of the designated flight engineer examiner's designation is 3 years.

(*i*) *Renewal* :

(1) Renewal will be at the discretion of the Authority.

(2) An applicant for renewal shall pass the appropriate skill test on the areas of operation listed in IS 2.4.6.2.

(*j*) *Additional designations* : When the Authority deems it necessary for a designated flight engineer examiner to receive additional class rating designations, the designated flight engineer examiner shall meet all the requirements in this Part for the designation.

Skill Test For Designated Flight Engineer Examiners.

2.4.6.2.—(*a*) The requirements for the skill test for designated flight engineer examiners is included in IS 2.4.6.2.

2.5. CABIN CREW AND AIR TRAFFIC SAFETY ELECTRONICS PERSONNEL LICENCES, RATINGS AND INSTRUCTORS' AUTHORISATIONS

2.5.1. Cabin Crew Licence, Ratings and Instructors' Authorisations.

2.5.1.1. General.

2.5.1.2. Applicability.

(*a*) This section prescribes the requirements for the issuing, renewal and re-issuing of cabin crew license, ratings, and instructors' authorisation.

2.5.1.3.—Eligibility Requirements : General.

(*a*) An applicant for an Cabin crew license and any associated rating shall—

(1) Be at least 18 years of age.

(2) Demonstrate the ability to read, write, speak, and understand the English language.

(3) Comply with the knowledge, experience, and competency requirements prescribed for the license and rating sought and ;

(4) Have completed an initial training course from either an AOC holder or an ATO within 12 months preceding the date of application.

(*b*) *Medical Fitness*—The applicant for a cabin crew licence shall hold a Class 2 medical certificate issued under this Part.

(*c*) *Knowledge*—The applicant for a cabin crew licence shall receive and pass ground training from an authorized instructor on the following subjects appropriate to the privileges granted to the holder of a cabin crew licence and appropriate aircraft type rating(s) :

(1) Air Law :

(*i*) Rules and Regulations relevant to the holder of a cabin crew licence.

(2) Theory of flight and aircraft operations :

(*i*) theory of flight ;

(*ii*) major aircraft components ;

(*iii*) critical surfaces (contamination) ;

(*iv*) pressurization systems ;

(*v*) weight and balance ;

(*vi*) meteorology/trubulence ;

(*vii*) physiology of flight-

(*a*) Oxygen system and use

(*b*) Effects of altitude

(*c*) Cabin poisoning

(3) Aircraft equipment and furnishings.

(*i*) Cabin crew member stations.

(*ii*) Cabin crew member panels.

(*iii*) Passenger seats.

(*iv*) Passenger service units and convenience panels.

(*v*) Passenger information signs.

(*vi*) Aircraft markings.

(*vii*) Aircraft placards.

(*viii*) Bassinets and bayonet tables.

(4) Aircraft systems.

(*i*) Air conditioning and pressurisation system.

(*ii*) Aircraft communication systems (call, interphone and passenger address).

(*iii*) Lighting and electrical systems.

(*iv*) Oxygen systems (flight crew, observer and passenger).

(*v*) Water system.

(*vi*) Entertainment and convenience systems.

(5) Aircraft exits.

(*i*) General information.

(*ii*) Exits with slides or slide rafts (preflight and normal operation).

(*iii*) Exits without slides (preflight and normal operations).

(*iv*) Window exits (preflight).

(6) Crew member communication and co-ordination.

(*i*) Authority of PIC.

(*ii*) Routine communication signals and procedures.

(*iii*) Crew member briefing.

(7) Routine crew member duties and procedures.

(*i*) Crew member general responsibilities.

(*ii*) Reporting duties and procedures for specific aircraft.

(*iii*) Pre-departure duties and procedures prior to passenger boarding.

(*iv*) Passenger boarding duties and procedures.

(*v*) Prior to movement on the surface duties and procedures.

(*vi*) Prior to takeoff duties and procedures applicable to specific aircraft.

(*vii*) In flight duties and procedures.

(*viii*) Prior to landing duties and procedures.

(*ix*) Movement on the surface and arrival duties and procedures.

(*x*) After arrival duties and procedures.

(*xi*) Intermediate stops.

(8) Passenger handling responsibilities—

(*i*) Crew member general responsibilities.

(*ii*) Infants, children, and unaccompanied minors.

(*iii*) Passengers needing special assistance.

(*iv*) Passengers needing special accommodation.

(*v*) Carry-on stowage requirements.

(*vi*) Passenger seating requirements.

(*vii*) No smoking requirements.

(9) Cabin Crew Emergency Procedures training syllabi—

(*i*) Emergency equipment.

(*ii*) Emergency communication and notification systems.

(*iii*) Aircraft exits.

(*iv*) Exits with slides or sliderafts (emergency operation).

(*v*) Slides and sliderafts in a ditching.

(*vi*) Exits without slides (emergency operation).

(*vii*) Window exits (emergency operation).

(*viii*) Exits with tailcones (emergency operation).

(*ix*) Cockpit exits (emergency operation).

(*x*) Ground evacuation and ditching equipment.

(*xi*) First aid equipment.

(*xii*) Oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE)).

(*xiii*) Firefighting equipment.

(*xiv*) Emergency lighting systems.

(10) Cabin Crew emergency procedure duties—

(*i*) General types of emergencies specific to aircraft, including crew coordination and communication.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (i.e. passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Hijacking and acts of unlawful interference.

(*xii*) Bomb threat.

(*xiii*) Turbulence.

(*xiv*) Other unusual situations including an awareness of other crew members' assignments and functions as they pertain to the cabin crew member's own duties.

(*xv*) Previous aircraft accidents and incidents.

(11) Aircraft specific emergency drills :

(*i*) Emergency exit drill ;

(*ii*) Fire and smoke drill ;

(*iii*) Emergency oxygen system drill ;

(*iv*) Flotation device drill ;

(*v*) Ditching drill, if applicable ;

(*vi*) Life raft removal and inflation drill, if applicable ;

(*vii*) Slide raft pack transfer drill, if applicable ;

(*viii*) Slide or slide raft deployment, inflation, and detachment drill, if applicable ;

(*ix*) Emergency evacuation slide drill, if applicable.

(12) Carriage of Dangerous Goods :

(*i*) General philosophy ;

(*ii*) Limitations on dangerous goods in Air Transportation ;

(*iii*) Prohibited goods ;
(*iv*) Package marking and Labeling ;

(*v*) Exceptions ;

(*vi*) Emergency procedures ;

(*vii*) Dangerous goods in passengers baggage.

(13) Human Factors :

(*i*) Fundamental human factor concepts ;

(*ii*) Crew resource management (CRM) ;

(14) Hygiene, Aviation medicine and first Aid—

(*i*) Terminology ;

(*ii*) Personal Hygiene ;

(*iii*) Tropical hygiene ;

(*iv*) Transmissible diseases ;

(*v*) Quarantinable Diseases ;

(*vi*) Epidemic diseases ;

(*vii*) Food poisoning ;

(*viii*) First-aid kits (contents and use) ;

(*ix*) Medical kits (contents and use) ;

(*x*) Universal precaution kits (contents and use) ;

(*xi*) Automated external defibrillators.

(15) *Knowledge Testing*.—The applicant for the cabin crew licence shall :

(*i*) Have received an endorsement for the knowledge test from authorised instructor who :

(*a*) Conducted the training on the knowledge subjects ; and

(*b*) Certifies that the person is prepared for the required knowledge test.

(*ii*) Pass the required knowledge test on the knowledge subjects listed in this subpart.

(16) *Skill*.—The applicant for a cabin crew licence shall :

(*i*) Pass a practical test with respect to any one type of aircraft used in commercial air transport to demonstrate the applicant's ability as specified by the Authority.

(17) *Experience*—The applicant for a cabin crew licence shall present to the Authority documentary evidence that he/she has the experience or training as specified under part 2 of this regulations.

(18) *Privileges*—Subject to compliance with the requirements specified in this part, the privileges of the holder of a cabin crew licence shall be ;

(*i*) To exercise all privileges of the holder of a cabin crew licence in an aircraft within the appropriate aircraft rating(s) ;

(*ii*) To act as a cabin crew in an aircraft within the appropriate aircraft type(s) engaged in operations other than commercial air transportation.

(19) *Validity*—The validity period of the licence is 5 years. A licence shall become invalid when a cabin crew has ceased to exercise the privileges of the licence for a period of 1 year. A licence shall remain invalid until the cabin crew's ability to exercise the privileges of the licence has been re-established.

(20) *Renewal*—The cabin crew licence shall be renewed by presenting to the Authority evidence of satisfactory passing a competency check on the areas of operation contained in part 8 of this regulation; and record of satisfactory completion of recurrent ground curricula training conducted by an AOC holder or an ATO on aircraft type rating(s) and emergency drills approved by the Authority relevant to the type(s) and/or variant(s) of aircraft and operations to which he/she is assigned within the preceding 12 calendar months.

(21) *Re-issue*—If the cabin crew licence has expired, the applicant shall have received refresher training acceptable to the Authority.

2.5.2. INSTRUCTORS FOR CABIN CREW

Requirements for Cabin Crew Instructor Rating/ Authorisation.

2.5.2.1.—(*a*) *Age* : An applicant for Cabin Crew instructor rating/ authorisation shall be at least 18 years of age.

(*b*) *Knowledge*.

(1) An applicant for a Cabin Crew instructor rating/authorisation shall have met the instructor requirements in 2.2.6 of this part ; and

(2) Any additional requirements as may be specified by the Authority.

(*c*) *Experience*—The applicant for a Cabin Crew instructor rating/ authorisation shall hold at least a current and valid Cabin Crew licence and have a minimum of three years experience as a Cabin Crew.

(*d*) *Privileges*.—The privileges of a Cabin Crew instructor rating/ authorisation are to give instruction to Cabin Crew licence applicants and to endorse those applicants for a knowledge or skill test as applicable.

(*e*) *Validity*.—Subject to compliance with the requirements specified in this Part, the validity period of the Cabin Crew instructor rating/authorisation is 2 years.

(*f*) *Renewal*.—A Cabin Crew instructor rating/authorisation that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that he/she has within the past 12 months preceding the expiry date—

(1) Conducted at least six exercises in an approved course for a Cabin Crew licence ; or

(2) Received refresher training acceptable to the Authority.

(*g*) Reissue. If the Cabin Crew instructor rating/authorization has expired, the applicant shall have received refresher training acceptable to the Authority.

2.5.3. AIR TRAFFIC SAFETY ELECTRONICS PERSONNEL LICENCE AND RATINGS

2.5.3. General.

Applicability.

2.5.3.1.—(*a*) This section prescribes the requirements for the issuing, renewal and re-issuing of Air Traffic Safety Electronics Personnel license and ratings.

Applicability.

2.5.3.2.—(*a*) This Subpart prescribes the requirements for issuance of an ATSEP licence and associated ratings.

2.5.3.3. *Eligibility Requirements* : General.

(*a*) An applicant for an ATSEP licence and any associated rating shall—

(1) Be at least 18 years of age.

(2) Demonstrate the ability to read, write, speak, and understand the English language, and by reading and explaining appropriate maintenance publications and by writing defect and repair statements.

(3) Comply with the knowledge, experience, and competency requirements prescribed for the license and rating sought.

(4) Pass all of the prescribed tests for the license and rating sought, within a period of 24 months.

(5) Present an appropriate graduation certificate of an approved course from an ATO.

2.5.3.4.—(*a*) The following ratings are issued under this subpart : Ratings.

(1) Communications.

(2) Surveillance.

(3) Navaids.

(4) Airfield Lighting/visual landing systems.

(5) Any other rating that may be considered by the Authority.

Knowledge Requirements for the Atsep Licence.

2.5.3.5.—(*a*) The applicant for an Air Traffic Safety Electronics Personnel licence shall demonstrate by passing a knowledge test covering at least the following areas :

(1) *Air Law* : Rules and regulations relevant to an Air Traffic Safety Electronics Personnel licence holder including.

(2) Knowledge areas in communication, Navigation, Surveillance Airfield lighting/visual landing systems.

(3) Applicant must pass an ATSEP pre-license course from an ATO.

(*b*) The basic knowledge examinations shall be conducted at an approved training organization under part 3 of these Regulations.

(*c*) Full or partial credit against the basic knowledge requirements and associated examinations shall be given for any other technical qualifications considered by the Authority to be equivalent to knowledge standard of this part.

Knowledge Requirements for the Atsep Ratings

2.5.3.6.—(*a*) Applicant for the communications rating shall pass the knowledge tests covering all the subjects in the approved communication curriculum in an ATO as listed in IS: 2.5.3.6 (*a*).

(*b*) Applicant for the Navaids rating shall pass the knowledge tests covering all the subjects in the approved Navaids curriculum in an ATO as listed in IS : 2.5.3.6 (*b*)

(*c*) Applicant for the Surveillance rating shall pass the knowledge test s covering all the subjects in the approved surveillance curriculum in an ATO as listed in IS : 2.5.3.6 (*c*)

(*d*) Applicant for the airfield lighting/visual landing systems rating shall pass the knowledge test s covering all the subjects in the approved Airfield lighting/visual landing systems curriculum in an ATO as listed in IS: 2.5.3.6 (*d*).

Experience Requirements.

2.5.3.7.—(*a*) An applicant for an ATSEP license and associated ratings may qualify by either practical experience or through completion of approved training in an ATO.

(*b*) *Practical experience*.—Each applicant for an ATSEP license and rating(s) relying on practical experience shall provide documentary evidence, acceptable to the Authority, of the following experience in the inspection, servicing and maintenance of CNS safety electronics engineering facilities or its components—

(1) Communications rating-12 months.

(2) Surveillance rating-12 months.

(3) Radio Navigational Aids rating-12 months.

(4) Airfield lighting/visual landing systems rating-12 months.

Skill Requirements.

2.5.3.8.—(*a*) Each applicant for an ATSEP license or rating must pass a skill test on the license or rating sought ;

(*b*) For rating(s) in different categories, the applicant shall undergo a 5 – weeks OJT field job tasks experience under the supervision of an ATSEP licence holder ;

(*c*) The applicant shall log evidence of satisfactory completion of all job tasks performed during the OJT as approved by the Authority for the rating(s) sought ; and

(*d*) The skill test shall cover the applicant's basic skill in performing practical projects on the subjects covered by the written test for the licence or rating(s) sought. The applicant will be provided with appropriate facilities, tools and materials.

Privileges and Limitations.

2.5.3.9.—(*a*) Except as specified in paragraphs (*e*) and (*f*) of this subsection, a licensed ATSEP may perform or supervise the maintenance, preventive maintenance , or modification of, or after inspection, approve for return to service, any CNS facility, appliance, component or part thereof, for which he or she is rated, provided the licensed ATSEP has—

(1) Satisfactorily performed the work at an earlier date ;

(2) Demonstrated the ability to perform the work to the satisfaction of the Authority ;

(3) Received training acceptable to the Authority on the tasks to be performed ; or

(4) Performed the work while working under the direct supervision of an appropriately rated and licensed ATSEP; and has had previous experience in the specific operation concerned or received training acceptable to the Authority on the task to be performed.

Duration of Atsep Licence/ Rating.

2.5.3.10.—(*a*) *Validity*—The duration of the ATSEP licence is five years. The validity of an ATSEP rating is 12 months from the date of issue.

(*b*) *Renewal*—An ATSEP licence or rating(s) becomes invalid if the licence holder has ceased to exercise the privileges of the licence or rating for a period of six months and shall remain invalid until the holder's ability to exercise the privileges of the licence or rating(s) has been re-established as specified by the Authority.

(*c*) *Reissue*.—If the ATSEP licence has expired, the applicant shall have received refresher training acceptable to the Authority.

2.6. Aircraft Maintenance Licensing, Instructors and Designated Examiners

2.6.1. General.

Applicability.

2.6.1.1.—(*a*) Subpart 2.6 prescribes the requirements for issuing the following licenses and associated ratings and/or authorisations for :

(1) Aircraft Maintenance Engineers.

(2) Inspection Authorisations

(3) Aircraft Repair Specialist.

(4) Aircraft Maintenance Engineer Instructors.

(5) Designated Aircraft Maintenance Engineer Examiners.

(*b*) An applicant shall, before being issued with an Aircraft Maintenance Engineers licence or rating, meet such requirements in respect of age, knowledge, experience and where appropriate, medical fitness and skill, as are specified for that licence or rating.

(*c*) An applicant for Aircraft Maintenance Engineers licence or rating, shall demonstrate, in a manner determined by the Authority, such requirements in respect of knowledge and skill as are specified for that licence or rating.

2.6.2. AIRCRAFT MAINTENANCE ENGINEER (AME)

2.6.2.1.—(*a*) This Subpart prescribes the requirements for issuance of an AME license and associated ratings.

2.6.2.2. *Eligibility Requirements* : General.

(*a*) An applicant for an AME licence and any associated rating shall—

(1) Be at least 18 years of age.

(2) Demonstrate the ability to read, write, speak, and understand the English language, by reading and explaining appropriate maintenance publications and by writing defect and repair statements.

(3) Comply with the knowledge, experience, and competency requirements prescribed for the license and rating sought.

(4) Pass all of the prescribed tests for the license and rating sought, within a period of 24 months.

(*b*) A licensed AME who applies for an additional rating must meet the requirements of 2.6.2.6 of these regulations and, within a period of 24 months, pass the tests prescribed by 2.6.2.5 and 2.6.2.7 of these regulations for the additional rating sought.

Ratings.

2.6.2.3.—(*a*) The following ratings are issued under this subpart (IS : 2.6.2.3 details the ratings and limitations issued by the Authority) :

(1) Airframe.

(2) Powerplant.

(3) Avionics.

(4) Other ratings as may be determined by the Authority.

(*b*) The following AME type ratings are issued under the Subpart :

(1) Airframe type ratings for all aircraft.

(2) Power plant type ratings for power plants on all aircraft.

(3) Avionics type ratings for all aircraft.

(4) Other specialized ratings as may be determined by the Authority.

2.6.2.4.—(*a*) The applicant for an aircraft maintenance Engineer licence shall have passed a general knowledge test and demonstrated a level of knowledge relevant to the privileges to be granted and appropriate to the responsibilities of an aircraft maintenance Engineer licence holder, in at least the following subjects : Knowledge Requirements for the AME Licence.

(1) Air law and airworthiness requirements.

(*i*) Rules and regulations relevant to an Aircraft Maintenance Engineer licence holder, including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organization and procedures ;

(2) Natural science and aircraft general knowledge.

(*i*) Basic mathematics ;

(*ii*) Units of measurement ; *ii*) fundamental principles and theory of physics and chemistry applicable to aircraft maintenance ;

(3) Aircraft engineering.

(*i*) Characteristics and applications of the materials of aircraft construction including principles of construction and functioning of aircraft structures,

(*ii*) Fastening techniques ;

(*iii*) Engines and their associated systems ;

(*iv*) Mechanical, fluid, electrical and electronic power sources ;

(*v*) Aircraft instrument and display systems ;

(*vi*) Aircraft control systems ;

(*vii*) Airborne navigation and communication systems ;

(4) Aircraft maintenance

(*i*) Tasks required to ensure the continuing airworthiness of an aircraft including methods and procedures for the overhaul, repair, inspection, replacement, modification or defect rectification of aircraft structures, components and systems in accordance with the methods prescribed in the relevant Maintenance Manuals and the applicable Standards of airworthiness ; and

(5) Human performance.

(*i*) Human performance, including principles of threat and error management, relevant to aircraft maintenance.

Knowledge Requirements for the Ratings.

2.6.2.5.—(*a*) The applicant for an airframe rating shall pass a knowledge test covering at least the following areas :

(1) Wood structures.

(2) Aircraft covering.

(3) Aircraft finishes.

(4) Sheet metal and non-metallic structures.

(5) Welding.

(6) Assembly and rigging.

(7) Airframe inspection.

(8) Fuel systems.

(9) Aircraft landing gear systems.

(10) Hydraulic and pneumatic power systems.

(11) Cabin atmosphere control systems.

(12) Aircraft instrument systems.

(13) Communication and navigation systems.

(14) Aircraft fuel systems.

(15) Aircraft electrical systems.

(16) Position and warning systems.

(17) Ice and rain control systems.

(18) Fire protection systems.

(*b*) The applicant for a power plant rating shall pass a knowledge test covering at least the following areas :

(1) Reciprocating systems.

(2) Turbine engines.

(3) Engine inspection.

(4) Engine instrument systems.

(5) Engine fire protection systems.

(6) Engine electrical systems.

(7) Lubrication systems.

(8) Ignition and starting systems.

(9) Fuel metering.

(10) Engine fuel systems.

(11) Induction and engine airflow systems.

(12) Engine cooling systems.

(13) Engine exhaust and reverser systems.

(14) Propellers.

(15) Auxiliary power units.

(*c*) The applicant for an avionics rating shall pass a knowledge test covering at least the following areas :

(1) Aircraft electrical systems ;

(2) Aircraft instrument systems ;

(3) Automatic flight control systems ;

(4) Aircraft radio and radio navigation systems,

(5) Aircraft navigation systems ; and

(6) Aircraft systems/components-avionics.

(*d*) The applicant shall pass each section of the test before applying for the skill tests prescribed by IS 2.6.2.7.

(*e*) The applicant for endorsement of an AME type rating shall have successfully completed an approved relevant type training in an ATO and provide documentary evidence, acceptable to the Authority of practical experience in representative tasks as contained in IS 2.6.2.5 (*e*).

Experience Requirements.

2.6.2.6.—(*a*) An applicant for an AME licence and associated ratings shall qualify by either practical experience or through completion of approved training in an ATO.

(*b*) *Practical Experience*.—Each applicant for an AME licence and rating(s) shall provide documentary evidence, acceptable to the Authority, of the following experience in the inspection, servicing and maintenance of aircraft or its components—

(1) Airframe rating-30 months.

(2) Powerplant rating-30 months.

(3) Airframe and Powerplant ratings-48 months.

(4) Avionics rating-36 months.

(5) Airframe, Powerplant and Avionics ratings-60 months.

(*c*) *Approved Training.*—Each applicant for an AME licence relying on completion of training in an Approved Training Organisation shall provide documentary evidence, acceptable to the Authority, of the following practical experience in the inspection, servicing and maintenance of aircraft or its components :

(1) Airframe rating-12 months.

(2) Powerplant rating-12 months.

(3) Airframe and Powerplant ratings-24 months.

(4) Avionics rating-12 months.

(5) Airframe, Powerplant and Avionics ratings-30 months practical work experience.

(*d*) The training requirements for a full aircraft maintenance engineer license, including requirements applicable to airframe and powerplant ratings, shall be complied with prior to obtaining the avionics rating.

Skill Requirements.

2.6.2.7.—(*a*) Each applicant for an AME license or rating must pass a skill test on the license or rating that he/she seeks. The tests cover the applicant's basic skill in performing practical projects on the subjects covered by the knowledge test for the license or rating, and shall contain at least the subjects in the Implementing Standard 2.6.2.7 appropriate to the license or rating sought.

Privileges and Limitations.

2.6.2.8.—(*a*) Except as specified in paragraphs (*e*) and (*f*) of this subsection, a licensed AME may perform or supervise the maintenance, preventive maintenance, or modification of, or after inspection, approve for return to service, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he or she is rated, provided the licensed AME has—

(1) Satisfactorily performed the work at an earlier date ;

(2) Demonstrated the ability to perform the work to the satisfaction of the Authority ;

(3) Received training acceptable to the Authority on the tasks to be performed ; or

(4) Performed the work while working under the direct supervision of a licensed AME or a licensed aviation repair specialist who is appropriately rated and has—

(*i*) Had previous experience in the specific operation concerned ; or

(*ii*) Received training acceptable to the Authority on the task to be performed.

(*b*) Except as specified in paragraphs (*e*) and (*f*) of this subsection, a licensed AME with an airframe rating may after he/she has performed the 100-hour inspection required by Part 8 of this chapter on an airframe, or any related part or appliance, and approve and return it to service.

(*c*) Except as specified in paragraphs (*e*) and (*f*) of this subsection, a licensed AME with a powerplant rating may perform the 100-hour inspection required by Part 8 of this chapter on a powerplant or propeller or any related part or appliance, and approve and return it to service.

(*d*) Except as specified in paragraph (*e*) of the subsection, a licensed AME with an Avionics rating may inspect, repair, maintain, function test and return to service aircraft avionics systems and components.

(*e*) An AME with an airframe or powerplant or avionics rating may not—

(1) Supervise the maintenance, preventive maintenance, or modification of, or approve and return to service, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he/she is rated unless he/she has satisfactorily performed the work concerned at an earlier date.

(2) Exercise the privileges of the license unless the licensed AME understands the current instructions for continued airworthiness and the maintenance instructions for the specific operation concerned.

(3) Perform a major repair or major modification of a propeller.

(*f*) An AME with an Airframe or Powerplant rating may not :

(1) Perform or supervise (unless under the direct supervision and control of an AOC holder that is authorised to perform maintenance, preventative maintenance, or modifications under an equivalent system in accordance with 9.4.1.3(*a*) of these regulations) any repair or alteration of instruments.

(2) Approve for return to service—

(*i*) Any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof after completion of a major alteration or major repair ; or

(*ii*) Any instrument after completion of any repair or alteration.

(*g*) Details of the certification privileges shall be endorsed on or attached to the licence, either directly or by reference to another document issued by the Authority.

2.6.2.9. Duration of AME Licence.

(*a*) *Validity*.—The duration of the AME licence is five years.

(*b*) *Renewal*.—An AME licence that has not expired may be renewed for an additional 5 years if the holder presents evidence to the Authority that he/she has within the past 24 months has exercised the privileges of the licence and complied with the recent experience requirements as contained in 2.6.2.10.

(*c*) *Reissue*.—If the AME licence has expired, the applicant shall have received refresher training acceptable to the Authority and passed a skill test on the areas of operation contained in IS: 2.6.2.7 for the AME general and any associated ratings.

Recent Experience Requirements.

2.6.2.10.—(*a*) A licensed AME may not exercise the privileges of his/her licence or rating unless, within the preceding 24 months—

(1) The Authority has found that he/she is able to do that work ; or

(2) For at least 6 months within the preceding 24 months—

(*i*) Served as an AME under his/her licence and rating ;

(*ii*) Technically supervised other AMEs ;

(*iii*) Provided aviation maintenance instruction or served as the direct supervisor of persons providing aviation maintenance instruction for an AME course or program acceptable to the Authority ;

(*iv*) Supervised the maintenance, preventive maintenance, or alteration of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof ; or

(*v*) Been engaged in any combination of paragraphs (*a*)(2)(*i*) through (*a*)(2)(*iv*) of this subsection.

Display of Licence.

2.6.2.11.—(*a*) Each person who holds an AME license shall keep it within the immediate area where he/she normally exercises the privileges of the license and shall present it for inspection upon the request of the Authority or an authorised representative of the Director-General, or any Federal, State, or local law enforcement officer.

2.6.3. INSPECTION AUTHORISATIONS.

Applicability.

2.6.3.1.—(*a*) This Subpart prescribes the requirements for issuance of inspection authorisations, and the conditions under which these authorisations are necessary.

Eligibility Requirements : General.

2.6.3.2.—(*a*) An applicant for an Inspection Authorisation shall :

(1) Hold a currently effective and valid AME license with both an airframe and powerplant rating, each of which is currently effective and has been in effect for a total of at least 3 years.

(2) Have been actively engaged, for at least the 2-year period before the date of application, in the maintenance of certificated aircraft and maintained in accordance with these regulations.

(3) Have a fixed base of operations at which the applicant may be located in person or by telephone during a normal working week but which need not be the place where the applicant will exercise inspection authority.

(4) Have available the equipment, facilities, and inspection data necessary to properly inspect airframes, aircraft engines, propellers, or any related component, part, or appliance.

(5) Pass a knowledge test that demonstrates the applicant's ability to inspect according to safety standards for approving aircraft for return to service after major and minor repairs, major and minor modifications, annual inspections, and progressive inspections, which are performed under Part 5.

(*b*) An applicant who fails the knowledge test prescribed in paragraph (*a*)(5) of this section may not apply for retesting until at least 90 days after the date he/she failed the test.

2.6.3.3. Knowledge Requirements for the IA

(*a*) The applicant for the IA shall pass a knowledge test covering at least the following areas :

(1) Certification procedures for products and parts.

(2) Airworthiness standards-aircraft.

(3) Airworthiness standards-rotorcraft.

(4) Airworthiness directives.

(5) Maintenance, preventive maintenance, rebuilding, and alteration.

(6) Identification and registration marking.

(7) Certification-Maintenance licensing.

(8) General operating and flight rules.

(9) Aircraft weight and balance.

Inspection Authorisation : Duration.

2.6.3.4.—(*a*) Each inspection authorisation expires 12 months from the date of issue/renewal.

(*b*) An inspection authorisation ceases to be effective whenever any of the following occurs :

(1) The authorisation is surrendered, suspended, or revoked.

(2) The holder no longer has a fixed base of operation.

(3) The holder no longer has the equipment, facilities, and inspection data required by 2.6.3.2(*a*)(3) and (4) of these regulations for issuance of his/her authorisation.

(*c*) The holder of an inspection authorisation that is suspended or revoked shall return it to the Authority.

Renewal of Authorisation.

2.6.3.5.—(*a*) To be eligible for renewal of an Inspection Authorisation for a 1-year period, an applicant shall, within 90 days prior to the expiration of the authorisation, present evidence to the Authority that the applicant still meets the requirements of 2.6.3.2 of these regulations and show that, during the current period of authorisation, the applicant has—

(1) Performed at least one annual inspection during each 3 month period the applicant held the authorisation ;

(2) Performed inspections of at least two major repairs or major modifications for each 3 month period the applicant held the authorisation ;

(3) Performed or supervised and approved at least one progressive inspection in accordance with standards prescribed by the Authority for each 12 month period the applicant held the authorisation ;

(4) Performed any combination of paragraphs (*a*)(1) through (*a*)(3) ;

(5) Successfully completed an Inspection Authorisation refresher course or series of courses acceptable to the Authority, of not less than 16 hours of instruction during the12-month period preceding the application for renewal ; or

(6) Passed a knowledge test administered by the Authority to determine that the applicant's knowledge of applicable regulations and standards is current.

2.6.3.6.—(*a*) When exercising the privileges of an IA, the holder shall keep it available for inspection by the aircraft owner and the AME submitting the aircraft, repair, or alteration for approval (if any), and shall present it at the request of the Authority or an authorised representative of the Director-General, or at the request of any Federal, State, or local law enforcement officer.

Privileges and Limitations.

(*b*) The holder of an Inspection Authorisation (IA) with a current and valid AME license may :

(1) Inspect and approve for return to service any aircraft, airframe, aircraft engine, propeller appliance, component, or part thereof on any aircraft with a 5,700 kg maximum take-off weight or less, after completion of a major repair or major alteration performed in accordance with Part 5 and done in accordance with technical data approved by the Authority.

(2) Perform an annual inspection, or perform or supervise a progressive inspection, according to Part 5, on any aircraft with a 5,700 kg maximum take-off weight or less, except those aircraft on a continuous maintenance program, and approve the aircraft for return to service.

(*c*) The holder of an IA with a current and valid AME licence may not :

(1) Exercise the privileges of the authorisation unless he or she holds a current and valid AME licence with airframe and power plant ratings.

(2) Inspect and approve for return to service any aircraft over 5,700 kg maximum take-off weight.

(3) Inspect and approve any airframe, aircraft engine, propeller, appliance, component, or part thereof which is subject to a maintenance program under Part 9 of these regulations.

(4) Inspect and approve for return to service any aircraft maintained in accordance with a continuous maintenance program approved under Part 9 of these regulations.

(5) Exercise any privilege of an Inspection Authorisation whenever that person no longer—

(*i*) Has a fixed base of operation ; and

(*ii*) Has access to the equipment, facilities, or inspection data required by 2.6.3.2(*a*)(3) and (4) of these regulations.

(6) Exercise the privileges of the authorisation until he or she has notified the Authority in writing of any changes in the fixed base of operation and equipment, facilities or inspection data and received approval in writing from the Authority for the proposed change.

2.6.4. Aircraft Repair Specialist

Applicability.

2.6.4.1.—(*a*) This Subpart prescribes the requirements for issuance of Aircraft Repair Specialist (AR) licences and ratings, and the conditions under which those licenses and ratings are necessary.

2.6.4.2. *Aircraft Repair Specialist Licences* : Eligibility

(*a*) An applicant for an aircraft repair specialist license and shall—

(1) Be at least 18 years of age.

(2) Demonstrate the ability to read, write, speak, and understand the English language, by reading and explaining appropriate maintenance publications and by writing defect and repair statements.

(3) Demonstrate a level of knowledge relevant to the privileges to be granted and appropriate to the duties to be performed.

(4) By specially qualified to perform maintenance on aircraft or components thereof, appropriate to the job for which he/she was employed.

(5) Be employed for a specific job requiring those special qualifications by an approved maintenance organisation certificated under Part 6 or an air operator certificated under Part 9 of these regulations that is required by its operating certificate or approved specific operating provisions to provide maintenance, preventive maintenance, or modifications to aircraft approved with a continuous maintenance program according to its maintenance control manual.

(6) Be recommended for certification by his employer, to the satisfaction of the Authority, as able to satisfactorily maintain aircraft or components, appropriate to the job for which he is employed.

(7) Have either of the following :

(*i*) At least 24 months of practical experience in the procedures, practices, inspection methods, materials, tools, machine tools, and equipment generally used in the maintenance duties of the specific job for which the person is to be employed and certificated ; or

(*ii*) Completed formal training that is acceptable to the Authority and is specifically designed to qualify the applicant for the job on which the applicant is to be employed.

2.6.4.3. RATINGS

(*a*) The following ratings may be issued under this sub-part :

(*i*) Propeller.

(*ii*) Computer.

(*iii*) Instrument.

(*iv*) Accessory.

(*v*) Components.

(*vi*) Welding.

(*vii*) Non destructive Testing (NDT).

(*viii*) Other as may be designated by the Authority.

(*b*) At no instance shall an aircraft repair specialist licence be issued with an airframe and/or powerplant or avionics rating to circumvent the process of obtaining an AME License.

(*c*) Ratings for an applicant employed by an approved maintenance organisation shall coincide with the rating(s) issued at the approved maintenance organisation limited to the specific job for which the person is employed to perform, supervise, or approve for return to service.

(*d*) At no instance shall an aviation repair specialist license be issued a rating in which the AMO has not been issued.

(*e*) Ratings for an applicant employed by an air operator shall coincide with the approved operations specifications and the approved maintenance control manual that identifies the air operator's authorisations limited to the specific job for which the person is employed to perform, supervise, or approve for return to service.

Aircraft Repair Specialist Licenses : Privileges and Limitations.

2.6.4.4.—(a) An aircraft repair specialist may perform or supervise the maintenance, preventive maintenance, or alteration of aircraft, airframes, aircraft engines, propellers, appliances, components, and parts appropriate to the designated speciality area for which the aircraft repair specialist is licensed and rated, but only in connection with employment by an AMO approved under Part 6 of these regulations or an AOC holder that is authorised to perform maintenance, preventive maintenance, or modifications under an equivalent system in accordance with 9.4.1.3(a) of these regulations.

(*b*) An aircraft repair specialist may not perform or supervise duties unless the aircraft repair specialist understands the current instructions of the employing certificate holder and the instructions for continued airworthiness, which relate to the specific operations concerned.

(*c*) An aircraft repair specialist licence must be surrendered to the Authority at the time the license holder leaves the employ of the AMO or AOC.

Display of Licence.

2.6.4.5.—(*a*) Each person who holds an aircraft repair specialist license shall keep it within the immediate area where he/she normally exercises the privileges of the license and shall present it for inspection upon the request of the Authority or an authorised representative of the Director General, or any Federal, State, or local law enforcement officer.

Duration of Licence.

2.6.4.6.—(*a*) Validity.

(1) The duration of the aviation repairman licence is five years provided the licence holder is in the continual employment of the sponsoring AMO or an AOC in an aviation repairman position.

(2) An aviation repairman licence must be surrendered to the Authority at the time the licence holder leaves the employ of the AMO or AOC.

(*d*) *Renewal.* An aviation repairman licence that has not expired may be renewed for an additional five years, subject to the continuation of employment, if the holder presents a recommendation for renewal from his/her employer, to the satisfaction of the Authority, as able to satisfactorily maintain aircraft or components, appropriate to the job for which he/she is employed.

2.6.5. Instructors for Aircraft Maintenance Engineer Ratings

2.6.5.1. Requirements for Aircraft maintenance Engineer Instructor Rating :

(*a*) *Age* : An applicant for aircraft maintenance engineer instructor licence and rating shall be at least 21 years of age.

(*b*) *Knowledge* :

(1) An applicant for a aircraft maintenance engineer instructor licence shall have met the instructor requirements in 2.2.6 of this part ; and

(2) Any additional requirements as may be specified by the Authority.

(*c*) *Experience* : The applicant for an aircraft maintenance engineer instructor licence and rating shall hold at least a current and valid aircraft maintenance engineer licence and rating for which the instructor licence is sought and have a minimum of three years experience as an aircraft maintenance engineer.

(*d*) *Privileges* : The privileges of aircraft maintenance engineer instructor licence are to give instruction to aircraft maintenance engineer licence applicants and to endorse those applicants for a knowledge or skill test as applicable.

(*e*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of the aircraft maintenance engineer instructor licence is 2 years.

(*f*) *Renewal* : An aircraft maintenance engineer instructor licence that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that he/she has within the past 12 months preceding the expiry date —

(1) Conducted at least six exercises in an approved course for an aircraft maintenance engineer licence or rating ; or

(2) Received refresher training acceptable to the Authority.

(*g*) *Reissue* : If the aircraft maintenance engineer instructor licence has expired, the applicant shall have received refresher training acceptable to the Authority.

2.6.6. Designated aircraft Maintenance Engineer Examiners

2.6.6.1. General Requirements—

(*a*) *Age* : An applicant for a aircraft maintenance engineer examiner designation shall be at least 23 years of age.

(*b*) *Medical* : There are no medical requirements for an aircraft maintenance engineer examiner designation.

(*c*) *General Eligibility* :

(1) Show evidence of a high level of aeronautical knowledge in the subject areas for AME certification in both reciprocating and turbine engine aircraft.

(2) Have held a valid AME with the ratings for which a designation is to issue for five years.

(3) Have been actively exercising the privileges of that AME certificate in the previous three years.

(4) Have a good record as an AME and a person engaged in the industry and community with a reputation for honesty and dependability.

(5) The applicant must have for test conducted using the skill test standard (STS) have a fixed base of operation adequately equipped to test at least 25 percent of all level 1, level 2, level 3 skill elements listed in Objective 3 of each subject area in the STS for the General, Airframe and Power plant.

Additionally, be equipped to perform all of the core competencies elements identified in Objective 2 of each subject area in the STS for General, Airframe and Powerplant ratings.

(6) The applicant must have a fixed base of operation, equipment and materials, must be adequate for an applicant to demonstrate the basic skills of the rating sought.

(7) The applicant must have an airworthy aircraft, other aircraft, aircraft subassemblies, operational mock-ups, and other aids that may be used for testing.

(8) The applicant must have tools, equipment, material, current publications, and necessary apparatus required to complete a project assignment must be the type recommended by the aircraft manufactures or accepted in the aviation industry.

2.6.6.2. Knowledge—

(*a*) The applicant shall pass a pre-designation test on the following :

(1) Air Law and Regulations for AME personnel.

(2) Current practices for the fleet of aircraft to be utilised.

(3) Best industry practices.

(4) Recent improvement in technology, testing and tooling.

2.6.6.3. Skill—

(*a*) The applicant shall be observed conducting a complete, actual skill test using the approved STS in a satisfactory manner.

(*b*) The applicant shall be observed completing the required documentation required by the Authority in a satisfactory manner.

2.6.6.4. Currency—

(*a*) After designation, a designated aircraft maintenance engineer examiner shall maintain currency by—

(1) Attending initial and recurrent training conducted by the Authority, and

(2) Maintaining a current and valid AME licence and applicable ratings.

(*b*) The designated AME examiner shall conduct at least 6 skill tests during any 12 calendar month period in order to the designation remain current.

(*c*) The designated AME examiner shall be observed by the Authority in the conduct of skill test at least once each 12 calendar months.

2.6.6.5. Privileges—

(*a*) The designated AME examiner may conduct skill test in accordance with the STS standards.

2.6.6.6. Validity—

(*a*) The AME examiner designation shall be valid for one year.

2.6.6.7. Renewal—

(*a*) The AME examiner designation may be renewed by Authority if :

(1) The need for the designation remains valid.

(2) The performance of the designated AME examiner has been satisfactory.

(3) The designated AME examiner has attended the designated AME examiner training conducted by the Authority in the previous 12 calendar months.

2.7. AIR TRAFFIC CONTROLLER LICENCES, CATEGORIES AND RATINGS

2.7.1.—(*a*) This section prescribes the requirements for the issue, renewal and re-issue of an air traffic controller licence and ratings. Applicability.

(*b*) Student air traffic controller

(1) The Authority shall take the appropriate measures to ensure that student air traffic controllers do not constitute a hazard to air navigation.

(2) The Authority shall not permit a student air traffic controller to receive instruction in an operational environment unless that student air traffic controller holds a current Class 3 Medical Assessment.

2.7.2.—(*a*) An applicant shall, before being issued with an air traffic controllers licence, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence, rating or authorization. Unlicensed State employees may operate as air traffic controllers on condition that they meet the same requirements. General.

2.7.3. AIR TRAFFIC CONTROLLER LICENCE AND RATINGS

2.7.3.1. Air traffic Controller Licence.

(*a*) *Age* : The applicant for an air traffic controller licence shall be not less than 21 years of age.

(*b*) *Medical* : The applicant for an air traffic controller licence shall hold a Class 3 medical certificate issued under this Part.

(*c*) *Knowledge* : The applicant for an air traffic controller licence shall receive knowledge instruction through an approved training course on the knowledge areas appropriate to the holder of an air traffic controller licence :

(1) Air law :

(*i*) Rules and regulations relevant to the air traffic controller.

(2) Air traffic control equipment :

(*i*) Principles, use and limitations of equipment used in air traffic control.

(3) General knowledge :

(*i*) Principles of flight ; principles of operation and functioning of aircraft, power plants and systems ; aircraft performances relevant to air traffic control operations.

(4) Human performance : Human performance relevant to air traffic control, including principles of threats and errors management ;

(5) Meteorology :

(*i*) Aeronautical meteorology ; use and appreciation of meteorological documentation and information ; origin and characteristics of weather phenomena affecting flight operations and safety ; altimetry.

(6) Navigation :

(*i*) Principles of air navigation ; principle, limitation and accuracy of navigation systems and visual aids.

(7) Operational procedures :

(*i*) Air traffic control, communication, radiotelephony and phraseology procedures (routine, non routine and emergency) ; use of the relevant aeronautical documentation ; safety practices associated with flight.

(*d*) *Knowledge testing* : An applicant for an air traffic controller licence shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge areas ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required knowledge test.

(*e*) *Experience* : The applicant shall have completed an approved training course and not less than three months' satisfactory service engaged in the actual control of air traffic under the supervision of an appropriately rated air traffic controller. The experience requirements specified for air traffic controller ratings in paragraph 2.7.3.2 will be credited as part of the experience specified in this paragraph.

(*f*) *Validity* : Subject to compliance with the requirement specified in this Part, the validity period of the licence is 5 years. For renewal of the licence *see* 2.2.4.

2.7.3.2.—(*a*) Air traffic controller ratings shall comprise the following categories : Air Traffic Controller Ratings.

(1) Aerodrome control rating.

(2) Approach control rating.

(3) Approach radar control rating.

(4) Approach precision radar control rating.

(5) Area control rating.

(6) Area radar control rating.

(*b*) *Knowledge* : The applicant for an air traffic controller rating shall receive knowledge instruction through an approved training course on the knowledge area appropriate to the holder an air traffic controller rating and have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following subjects in so far as they affect the area of responsibility :

(1) Aerodrome control rating :

(*i*) Aerodrome layout; physical characteristics and visual aids ;

(*ii*) Airspace structure ;

(*iii*) Applicable rules, procedures and source of information ;

(*iv*) Air navigation facilities ;

(*v*) Air traffic control equipment and its use ;

(*vi*) Terrain and prominent landmarks ;

(*vii*) Characteristics of air traffic ;

(*viii*) Weather phenomena ; and

(*ix*) Emergency and search and rescue plans ;

(2) Approach control procedural and area control procedural ratings :

(*i*) Airspace structure ;

(*ii*) Applicable rules, procedures and source of information ;

(*iii*) Air navigation facilities ;

(*iv*) Air traffic control equipment and its use ;

(*v*) Terrain and prominent landmarks ;

(*vi*) Characteristics of air traffic and traffic flow ;

(*vii*) Weather phenomena ; and

(*viii*) Emergency and search and rescue plans ; and

(3) Approach control surveillance, approach precision radar control and area control surveillance ratings : The applicant shall meet the requirements specified in item 2 above) in so far as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects :

(*i*) Principles, use and limitations of applicable ATS surveillance systems and associated equipment ; and

(*ii*) Procedures for the provision of ATS surveillance service, as appropriate, including procedures to ensure appropriate terrain clearance.

(*c*) *Knowledge testing* : An applicant for an air traffic controller rating shall :

(1)Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge areas ; and

(*ii*) Certifies that the person is prepared for the required knowledge test ; and

(2) Pass the required knowledge test.

(*d*) *Experience* : The applicant for an air traffic controller licence shall have :

(1) Satisfactorily completed an approved training course ;

(2) Provided, satisfactorily, under the supervision of an appropriately rated air traffic controller :

(*i*) aerodrome control rating : an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought ;

(*ii*) approach control procedural, approach control surveillance, area control procedural or area control surveillance rating: the control service for which the rating is sought, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought ;

(*iii*) Approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Authority. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought ; and

(3) If the privileges of the approach control surveillance rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated controller.

(4) The experience specified under (2)(*ii*) shall have been completed within the 6-month period immediately preceding application.

(5) When the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, the Authority shall determine whether the experience requirement of 2.7.3.2 may be reduced, and if so, to what extent.

(*e*) *Skill* : The applicant shall have demonstrated, at a level appropriate to the privileges being granted, the skill, judgment and performance required to provide a safe, orderly and expeditious control service, including the recognition and management of threats and errors.

(*f*) *Privileges and limitations* :

(1) Subject to compliance with the requirements specified in this part, the privileges of the holder of an air traffic controller licence with one or more of the under mentioned ratings shall be :

(*i*) Aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the licence holder is rated ;

(*ii*) *Approach control procedural rating* : To provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service ;

(*iii*) *Approach control surveillance rating* : To provide and/or supervise the provision of approach control service with the use of applicable ATS surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service; subject to compliance with the provisions of (*d*)(2)(*iii*), the privileges shall include the provision of surveillance radar approaches ;

(*iv*) Approach precision radar control rating : To provide and/or supervise the provision of precision approach radar service at the aerodrome for which the licence holder is rated ;

(*v*) Area control procedural rating : To provide and/or supervise the provision of area control service within the control area or portion thereof, for which the licence holder is rated; and

(*vi*) Area control surveillance rating : To provide and/or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the licence holder is rated.

(2) Before exercising the privileges indicated in (*d*)(1), the licence holder shall be familiar with all pertinent and current information.

(3) A holder of an air traffic controller licence and ratings(s) shall not provide instruction in an operational environment unless the licence holder has received proper authorisation from the Authority.

(*g*) *Validity of ratings* : A rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period of 6 months. A rating shall remain invalid until the controller’s ability to exercise the privileges of the rating has been re-established.

(*h*) When two air traffic controller ratings are sought concurrently, the Authority shall determine the applicable requirements on the basis of the requirements for each rating. These requirements shall not be less than those of the more demanding rating.

2.8. FLIGHT DISPATCHER LICENCE, RATING(S), INSTRUCTORS, AND DESIGNATED EXAMINERS

Applicability.

2.8.1.—(*a*) This section prescribes the requirements for the issue, renewal and re-issue of a flight dispatcher licence, instructors for flight dispatcher licences and designation of flight dispatcher examiner.

2.8.2.—(*a*) An applicant shall, before being issued with a flight dispatcher licence, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence. General.

(*b*) An applicant shall for renewal or re-issue of a licence meet the requirements as are specified for that licence.

2.8.3. Flight Dispatcher Licence.

2.8.3.1. General Requirements—

(*a*) *Age* : The applicant for a flight dispatcher licence shall be not less than 21 years of age.

(*b*) *Knowledge* : The applicant for a flight dispatcher licence shall receive and log training from an authorized instructor and have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight dispatcher licence, in at least the following subjects.

(1) Air law :

(*i*) Rules and regulations relevant to the holder of a flight dispatcher licence ;

(*ii*) Appropriate air traffic services practices and procedures ;

(2) Aircraft general knowledge :

(*i*) Principles of operation of aeroplane engines, systems and instruments ;

(*ii*) Operating limitations of aeroplanes and engines ;

(*iii*) Minimum equipment list ;

(3) Flight performance calculation, planning procedures and loading :

(*i*) Effects of loading and mass distribution on aircraft performance and flight characteristics ; mass and balance calculations ;

(*ii*) Operational flight planning ; fuel consumption and endurance calculations ; alternate aerodrome selection procedures ; en-route cruise control ; extended range operation ;

(*iii*) Preparation and filing of air traffic services flight plans ; and

(*iv*) Basic principles of computer-assisted planning systems.

(4) Human performance :

(*i*) Human performance relevant to dispatch duties, including principles of threats and errors management ;

(5) *Meteorology* :

(*i*) Aeronautical meteorology ; the movement of pressure systems ; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions.

(*ii*) Interpretation and application of aeronautical meteorological reports, charts and forecasts, codes and abbreviations; use of, and procedures for obtaining, meteorological information.

(6) *Navigation* :

(*i*) Principles of air navigation with particular reference to instrument flight.

(7) *Operational procedures* :

(*i*) Use of aeronautical documentation ;

(*ii*) Operational procedures for the carriage of freight and dangerous goods ;

(*iii*) Procedures relating to aircraft accidents and incidents ; emergency flight procedures ;

(*iv*) Procedures relating to unlawful interference and sabotage of aircraft ; and

(8) Principles of Flight relating to the appropriate category of aircraft.

(9) *Radio communication* :

(*i*) Procedures for communicating with aircraft and relevant ground stations.

(*c*) The applicant for the flight dispatcher licence shall :

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge areas ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required knowledge test.

(*d*) Experience.

(1) The applicant for a flight dispatcher licence shall have gained the following experience :

(*i*) A total of 2 years of service in any one or in any combination of the capacities specified in (*A*) to (*C*) inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least one year :

(*a*) A flight crewmember in air transportation ; or

(*b*) A meteorologist in an organisation dispatching aircraft in air transportation ; or

(*c*) An air traffic controller ; or a technical supervisor of flight dispatchers or air transportation flight operations systems ; or

(*ii*) At least one year as an assistant in the dispatching of air transport ; or

(*iii*) Have satisfactorily completed a course of approved training.

(2) The applicant shall have served under the supervision of a flight dispatcher for at least 90 working days within the 6 months immediately preceding the application.

(*e*) *Skill* : The applicant shall have demonstrated the ability, by passing a skill test on the subjects listed in IS 2.8.3.2 to :

(1) Make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports; provide an operationally valid briefing on weather conditions prevailing in the general neighbourhood of a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates.

(2) Determine the optimum flight path for a given segment, and create accurate manual and/or computer generated flight plans.

(3) Provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions as appropriate to the duties of the holder of a flight dispatcher licence.

(4) Recognize and management threats and errors.

(*f*) *Privileges* : Subject to compliance with the requirements specified in this Part, the privileges of the holder of a flight dispatcher licence shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements in ICAO *Annex* 6, as contained in Parts 8 and 9 of these regulations.

(*g*) *Validity* : The validity period of the licence is 5 years. A licence shall become invalid when a flight dispatcher has ceased to exercise the privileges of the licence for a period of 6 months. A licence shall remain invalid until the flight dispatcher's ability to exercise the privileges of the licence has been re-established.

(*h*) *Renewal* : The flight dispatcher licence may be renewed by presenting to the Authority evidence of successfully passing a competency check on the areas of operation listed in IS : 2.8.3.2.

(*i*) *Reissue* : If the flight dispatcher licence has expired, the applicant shall have received refresher training acceptable to the Authority and passed the skill test on the areas of operation contained in IS: 2.8.3.2.

Skill Test for the Flight Dispatcher Licence.

2.8.3.2.—(*a*) Implementing Standard (IS) 2.8.3.2 contains the list of operations included in the flight dispatcher licence skill test.

Flight Dispatcher Licence Aircraft Type Ratings.

2.8.3.3.—(*a*) The applicant for Flight Dispatcher Aircraft type rating shall receive knowledge instruction through an approved training course on the knowledge area appropriate to the holder of a flight Dispatcher Aircraft type rating and have demonstrated a level of knowledge appropriate to the privileges as specified in 8.10.1.14 (D).

(*b*) The applicant for the Flight Dispatcher Aircraft type rating (s) shall provide evidence of successful completion of the approved training as specified in (*a*) above before endorsement as a rating on the valid flight Dispatcher licence.

(*c*) *Privileges* : Subject to compliance with the requirements specified in this Part, the privileges of the holder of a flight dispatcher Aircraft type rating (s) shall be to serve in that capacity with responsibility for each aircraft type for which the applicant meets the requirements, as contained in Parts 8 of these regulations.

(*d*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of the Flight Dispatcher aircraft type rating is 1 year.

2.8.4. Instructors for Flight Dispatchers

Requirements for Flight dispatcher Instructor Rating.

2.8.4.1.—(*a*) *Age* : An applicant for Flight Dispatcher instructor rating shall be at least 21 years of age.

(*b*) *Knowledge* :

(1) An applicant for a Flight Dispatcher instructor rating shall have met the instructor requirements in 2.2.6 of this part ; and

(2) Any additional requirements as may be specified by the Authority.

(*c*) *Experience* : The applicant for a Flight Dispatcher instructor rating shall hold at least a current and valid Flight Dispatcher licence and have a minimum of three years experience as a Flight Dispatcher.

(*d*) *Privileges* : The privileges of a Flight Dispatcher instructor rating are to give instruction to Flight Dispatcher licence applicants and to endorse those applicants for a knowledge or skill test as applicable.

(*e*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of the Flight Dispatcher instructor rating is 2 years.

(*f*)*Renewal* : A Flight Dispatcher instructor rating that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that he/she has within the past 12 months preceding the expiry date—

(1) Conducted at least six exercises in an approved course for a Flight Dispatcher rating ; or

(2) Received refresher training acceptable to the Authority.

(*g*) *Reissue* : If the Flight Dispatcher instructor rating has expired, the applicant shall have received refresher training acceptable to the Authority.

2.8.5. Designated Examiners for Flight Dispatchers.

2.8.5.1. General Requirements.

(*a*) Age. An applicant for a flight dispatcher examiner designation shall be at least 23 years of age.

(*b*) General Eligibility.

(1) Show evidence of a high level of aeronautical knowledge in the subject areas for the FD certification.

(2) Have held a FD license for at least five years prior to the designation.

(3) Have been actively exercising the privileges of the FD license in commercial air transport in the previous three years.

(4) Have a good record as a FD and a person engaged in the industry and community with a reputation for hones and dependability.

(5) Have satisfactorily completed the FD examiner orientation program with the Authority.

(6) The applicant must have available a test site that is fully capable of doing all items required for the proper dispatch of a commercial flight in accordance with the regulatory requirements. This may be the flight dispatch of an active commercial airline.

2.8.5.2. Knowledge

(*a*) The applicant shall have passed a pre-designation test on the following :

(1) Air Law and Regulations for FD personnel.

(2) Aircraft knowledge on the aircraft used for testing.

(3) Flight performance calculation and planning procedures.

(4) Human performance.

(5) Meteorology.

(6) Navigation.

(7) Radio communication.

(8) Recent changes in technology to include fly by wire aircraft systems, GPS navigation, required navigation performance (RNP) requirements, TCAS, ADS-B, as well and Enhanced Wind Shear Systems.

2.8.5.3. *Skill.*

(*a*) The Authority shall observe the applicant conducting a complete actual FD certification using the approved STS in a satisfactory manner.

(*b*) The applicant shall complete all required paper work for the certification as required by the Authority.

2.8.5.4. *Currency.*

(*a*) After designation, a FD examiner shall maintain currency by

(1) Attending initial and recurrent training conducted by the Authority, and

(2) Maintaining a current and valid FD licence.

(*b*) The designated FD examiner shall conduct at least 6 skill tests during any 12 calendar month period in order for the designation to remain current.

(*c*) The designated FD examiner shall be observed by the Authority in the conduct of a skill test at least once each 12 calendar months.

2.8.5.5. *Privileges.*

(*a*) The designated FD examiner may conduct Skill test for the Flight Operation Officer license in accordance with approved STS standard.

(*b*) The designated FD examiner may conduct or monitor any portion of a computerised knowledge test.

2.8.5.6. *Validity.*

(*a*) The FD examiner designation shall be valid for three years.

2.8.5.7. *Renewal.*

(*a*) The FD examiner designation may be renewed by the Authority if :

(1) The need for the designation remains valid ;

(2) The performance of the examiner has been satisfactory ; and

2.9. AERONAUTICAL STATION OPERATOR PERSONNEL

2.9.1. *Applicability*

(*a*) This section prescribes the requirements for the issue, renewal or re-issue of an aeronautical station operator licence.

2.9.2. *General*

(*a*) An applicant shall before being issued with an aeronautical station operator licence, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specificied for that licence. Unlicensed individuals may operate as aeronautical station operators on the condition that they meet the same requirements.

(*b*) An applicant shall for renewal or re-issue of a licence, rating or authorisation meet the requirements as are specified for that licence.

2.9.3.—(*a*) *Age* : The applicant for an aeronautical station operator licence shall be not less than 18 years of age.

(*b*) *Knowledge* : The applicant for an aeronautical station operator licence shall receive and log ground training from an authorised instructor on the following subjects appropriate to the privileges of an aeronautical station operator :

(1) General Knowledge. Air traffic services provided within Nigeria.

(2) Operational Procedures. Radiotelephony procedures ; phraseology ; telecommunication network.

(3) Rules and regulations. Rules and regulations applicable to the aeronautical station operator.

(4) Telecommunication equipment. Principles, use and limitations of telecommunication equipment in an aeronautical station.

(*c*) *Knowledge Testing*.—An applicant for an aeronautical station operator licence shall—

(1) Have received an endorsement for the knowledge test from an authorised instructor who :

(*i*) Conducted the training on the knowledge areas ; and

(*ii*) Certifies that the person is prepared for the required knowledge test.

(2) Pass the required knowledge test.

(*d*) *Experience*.—The applicant for an aeronautical station operator licence shall have :

(1) Satisfactorily completed an approved training course within the 12-month period immediately preceding application, and have served satisfactorily under a qualified aeronautical station operator for not less than 2 months ; or

(2) Satisfactorily served under a qualified aeronautical station operator for not less than 6 months during the 12-month period immediately preceding application.

(*e*) *Skill*.—The applicant for an aeronautical station operator licence shall demonstrate, or have demonstrated, competency in :

(1) Operating the telecommunication equipment in use ; and

(2) Transmitting and receiving radiotelephony messages with efficiency and accuracy.

(*f*)*Privileges and limitations*.—Subject to compliance with the requirements specified in this Part :

(1) The privileges of the holder of an aeronautical station operator licence shall be to act as an operator in an aeronautical station.

(2) Before exercising the privileges of the licence, the holder shall be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at that aeronautical station.

(3) The aeronautical station operator licence does not qualify the holder to provide Aerodrome Flight Information Service.

(*g*) *Validity*.—The validity period of the licence is 5 years. A licence shall become invalid when an aeronautical station operator has ceased to exercise the privileges of the licence for a period of 6 months. A licence shall remain invalid until the aeronautical station operator's ability to exercise the privileges of the licence has been re-established.

(*h*) *Renewal* : An aeronautical station operator licence that has not expired may be renewed every 5 years if the holder presents to the Authority evidence that he/she has within the past 6 months preceding the expiry date —

(1) Be actively engaged in the duties of an aeronautical station operator ; or

(2) Received refresher training acceptable to the Authority.

(*i*) *Reissue* : If the Aeronautical Station Operator licence has expired, the applicant shall have received refresher training acceptable to the Authority.

2.10. PARACHUTE RIGGER LICENCES, INSTRUCTORS AND DESIGNATED PARACHUTE RIGGER EXAMINERS.

2.10.1.1. Applicability.

(*a*) This Subpart prescribes the requirements for issuance of a parachute rigger licenses and ratings, and the conditions under which those licenses and ratings are necessary.

2.10.1.2. *Eligibility Requirements* : General.

(*a*) To be eligible for a parachute rigger license, a person shall—

(1) Be at least 18 years of age.

(2) Be able to read, speak, write, and understand the English language.

(3) Comply with the sections of this subpart that apply to the license and type rating he or she seeks.

2.10.1.3. License Required.

(*a*) No person may pack, maintain, or alter any personnel-carrying parachute intended for emergency use in connection with civil aircraft of Nigeria unless he or she holds an appropriate current license and type rating issued under this Subpart and complies with this Subpart.

(*b*) Except as allowed by paragraph (*c*) of this subsection, no person may pack, maintain, or alter any main parachute of a dual parachute pack to be used for intentional jumping from a civil aircraft of Nigeria unless he or she has an appropriate valid license issued under this Subpart.

(*c*) A person who does not hold a license may pack the main parachute of a dual parachute pack that is to be used by him or her for intentional jumping.

(*d*) Each person who holds a parachute rigger license shall present it for inspection upon the request of the Authority or an authorised representative of the Director General Office, or any Federal, State or Local Law Enforcement Officer.

(*e*) The following parachute rigger licences are issued under this part :

(1) Senior parachute rigger.

(2) Master parachute rigger.

(*f*) Sections 2.10.1.9 through 2.10.1.12 do not apply to parachutes packed, maintained, or altered for the use of the armed forces.

Senior Parachute Rigger Licence: Experience, Knowledge, and Skill Requirements.

2.10.1.4.—(*a*) An applicant for a senior parachute rigger license shall—

(1) Present evidence satisfactory to the Authority that he or she has packed at least 20 parachutes of each type for which he or she seeks a rating, in accordance with the manufacturer's instructions and under the supervision of a licensed parachute rigger holding a rating for that type or a person holding an appropriate military rating.

(2) Pass a knowledge test, with respect to a parachute applicable to at least one type parachute appropriate to the type rating sought, on—

(*i*) Construction, packing, and maintenance ;

(*ii*) The manufacturer's instructions ; and

(*iii*) The regulations of this Subpart.

(3) Pass skill test showing the ability to pack and maintain at least one type of parachute appropriate to the type rating sought. Requirements for the skill test are contained in IS 2.10.1.4.

2.10.1.5. Master Parachute Rigger Licence : Experience, Knowledge, And Skill Requirements.

(*a*) An applicant for a master parachute rigger license shall meet the following requirements :

(1) Present evidence satisfactory to the Authority of at least 3 years of experience as a parachute rigger and having satisfactorily packed at least 100 parachutes of each of two types appropriate to type ratings held, in accordance with the manufacturer's instructions—

(*i*) While a licensed and appropriately rated senior parachute rigger ; or

(*ii*) While under the supervision of a licensed and appropriately rated parachute rigger or a person holding appropriate military ratings.

(*iii*) An applicant may combine experience specified in paragraphs (*a*) (1) and (2) of this paragraph to meet the requirements of this subsection.

(2) If the applicant is not the holder of a senior parachute rigger license, pass a knowledge test, with respect to parachutes appropriate to the type rating sought, on—

(*i*) Their construction, packing, and maintenance ;

(*ii*) The manufacturer's instructions ; and

(*iii*) The regulations of this Subpart.

(3) Pass skill test showing the ability to pack and maintain two types of parachutes appropriate to the type ratings sought. Requirements for the skill test are contained in IS 2.10.1.5.

2.10.1.6. Type Ratings.

(*a*) The following type ratings are issued under this subpart :

(1) Seat.

(2) Back.

(3) Chest.

(4) Lap.

(*b*) The skill test requirements for a type rating are contained in IS 2.10.1.6.

(*c*) The holder of a senior parachute rigger licence who qualifies for a master parachute rigger licence is entitled to have placed on the senior parachute rigger licence the ratings that were on the parachute rigger licence.

2.10.1.7. Additional Type Ratings: Requirements.

(*a*) A licenced parachute rigger who applies for an additional type rating shall—

(1) Present evidence satisfactory to the Authority of having packed at least 20 parachutes of the type rating sought, in accordance with the manufacturer's instructions and under the supervision of a licensed parachute rigger holding a rating for that type or a person holding an appropriate military rating ; and

(2) Pass a skill test, to the satisfaction of the Authority, showing the ability to pack and maintain the type of parachute for which the applicant seeks a rating.

2.10.1.8. Privileges

(*a*) A licenced senior parachute rigger may—

(1) Pack or maintain (except for major repair) any type of parachute for which he or she is rated ; and

(2) Supervise other persons in packing any type of parachute for which he or she is rated.

(*b*) A licenced master parachute rigger may—

(1) Pack, maintain, or alter any type of parachute for which he or she is rated ; and

(2) Supervise other persons in packing, maintaining, or altering any type of parachute for which he or she is rated.

(*c*) A licenced parachute rigger need not comply with 2.10.1.9 through 2.10.1.12 of these regulations (related to facilities, equipment, performance standards, records, recent experience, and seal) in packing, maintaining, or altering (if authorised) the main parachute of a dual parachute pack to be used for intentional jumping.

2.10.1.9. Facilities and Equipment

(*a*) No licenced parachute rigger shall exercise the privileges of his licence unless he or she has at least the following facilities and equipment available—

(1) A smooth top table at least three feet wide by 40 feet long ;

(2) Suitable housing that is adequately heated, lighted, and ventilated for drying and airing parachutes ;

(3) Enough packing tools and other equipment to pack and maintain the types of parachutes serviced ; and

(4) Adequate housing facilities to perform applicable duties and to protect tools and equipment.

2.10.1.10. Performance Standards and Recency Requirements

(*a*) No licenced parachute rigger may—

(1) Pack, maintain, or alter any parachute unless he or she is rated for that type ;

(2) Pack a parachute that is not safe for emergency use ;

(3) Pack a parachute that has not been thoroughly dried and aired ;

(4) Alter a parachute in a manner that is not specifically authorised by the Authority or the manufacturer ;

(5) Pack, maintain, or alter a parachute in any manner that deviates from procedures approved by the Authority or the manufacturer of the parachute ; or

(6) Exercise the privileges of the licence and type rating unless he or she understands the current manufacturer's instructions for the operation involved and has—

(*i*) Performed duties under the license for at least 90 days within the preceding 12 months ; or

(*ii*) Shown to the Authority the ability to perform those duties.

2.10.1.11. Records.

(*a*) Each licenced parachute rigger shall keep a record of the packing, maintenance, and alteration of parachutes performed or supervision of those activities.

(*b*) Each licenced parachute rigger who packs a parachute shall enter on the parachute packing record attached to the parachute, the date and place of the packing, a notation of any defects found during any inspection, and shall sign that record with his or her name and license number.

(*c*) Each parachute rigger shall sign the record required by paragraph (*b*) of this subsection with the name and the number of his or her license.

(*d*) The record required by paragraph (a) of this subsection shall contain, with respect to each parachute worked on, a statement of—

(1) Its type and make ;

(2) Its serial number ;

(3) The name and address of its owner or user ;

(4) The kind and extent of the work performed ;

(5) The date when and place where the work was performed ; and

(6) The results of any drop tests made with it.

(*e*) Each person who makes a record under paragraph (*a*) of this subsection shall keep it for at least 2 years after the date it is made.

2.10.1.12. Seal.

(*a*) Each licenced parachute rigger shall have a seal with an identifying mark prescribed by the Authority, and a seal press.

(*b*) After packing a parachute, the parachute rigger shall seal the pack with his or her seal in accordance with the manufacturer's recommendation for that type of parachute.

2.10.1.13. Duration of Parachute Rigger Licence

(*a*) *Validity* : The validity period of the licence is 5 years. A licence shall become invalid when a parachute rigger has ceased to exercise the privileges of the licence for a period of 6 months. A licence shall remain invalid until the parachute rigger's ability to exercise the privileges of the licence has been re-established.

(*b*) *Renewal* : An parachute rigger licence that has not expired may be renewed for an additional five years if the holder presents to the Authority evidence that he/she has within the past 6 months preceding the expiry date —

(1) Be actively engaged in the duties of a parachute rigger, or

(2) Received refresher training acceptable to the Authority.

(*c*) *Reissue* : If the parachute rigger licence has expired, the applicant shall have received refresher training acceptable to the Authority and passed the skill test on the areas of operation contained in IS: 2.10.1.4, IS: 2.10.1.5, or IS: 2.10.1.6, as applicable to the licence to be renewed.

2.10.1.14. Display of Licence

(*a*) Each person who holds a parachute rigger licence shall keep it within the immediate area where he/she normally exercises the privileges of the licence and shall present it for inspection upon the request of the Authority or an authorised representative of the Director General, or any Federal, State, or local law enforcement officer.

2.10.2. Parachute Rigger Instructor Requirements

2.10.2.1. Requirements for a parachute rigger Instructor Licence

(*a*) *Age* : An applicant for parachute rigger instructor licence and rating shall be at least 21 years of age.

(*b*) *Knowledge* :

(1) An applicant for a parachute rigger instructor licence shall have met the instructor requirements in 2.2.6 of this part ; and

(2) Any additional requirements as may be specified by the Authority.

(*c*) *Experience* : The applicant for a parachute rigger instructor licence shall hold at least a current and valid parachute rigger licence and ratings applicable to the instructor licence sought, and have a minimum of three years experience as a parachute rigger.

(*d*) *Privileges* : The privileges of a parachute rigger instructor licence and rating are to give instruction to parachute rigger licence applicants and to endorse those applicants for a knowledge or skill test as applicable.

(*e*) *Validity* : Subject to compliance with the requirements specified in this Part, the validity period of the parachute rigger instructor licence is 2 years.

(*f*) *Renewal* : A parachute rigger instructor licence that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that he/she has within the past 12 months preceding the expiry date—

(1) Conducted at least six exercises in an approved course for a parachute rigger licence ; or

(2) Received refresher training acceptable to the Authority.

(*g*) *Reissue* : If the parachute rigger instructor licence has expired, the applicant shall have received refresher training acceptable to the Authority.

2.10.3. Designated Parachute Rigger Examiner Requirement.

2.10.3.1. General Requirements.

(*a*) *Age* : An applicant for a parachute rigger examiner designation shall be at least 23 years of age.

(*b*) General Eligibility.

(1) Show evidence of a high level of aeronautical knowledge in the subject areas for the DPRE certification.

(2) Have held a PR license for at least five years prior to the designation.

(3) Have been actively exercising the privileges of the PR for the previous three years.

(4) Have a good record as a PR and a person engaged in the industry and community with a reputation for hones and dependability.

(5) Have satisfactorily completed the DPRE orientation program with the Authority.

(6) The applicant must have fixed base of operations adequately equipped to all practical Subject Areas to return to service condition.

(7) The applicant shall have at the fixed base of operation adequate equipment to test the Tasks in each Area of Operation listed in the PTS.

(8) The applicant shall have tools, equipment, current publications, and materials required to complete a project assignment as recommended by the parachute manufacture or industry standards.

2.10.3.2. *Knowledge.*

(*a*) The applicant shall have passed a pre-designation test on the following :

(1) Air Law and Regulations for PR personnel.

(2) Packing and maintaining a wide variety of parachutes.

(3) Alterations of parachutes in accordance with manufactures and industry standards.

(4) Proper use of Seals for identification purposes.

(5) Proper record keeping requirements.

2.10.3.3. *Skill.*

(*a*) The Authority shall observe the applicant conducting a complete actual Senior Parachute or Master Parachute Rigger certification using the approved STS in a satisfactory manner.

(*b*) The applicant shall complete all required paper work for the certification as required by the Authority.

2.10.3.4. *Currency.*

(*a*) After designation, a DPRE shall maintain currency by

(1) Attending initial and recurrent training conducted by the Authority, and

(2) Maintaining a current and valid parachute rigger licence and applicable ratings.

(*b*) The DPRE shall conduct at least 6 Skill test during any 12 calendar month period in order for the designation to remain current.

(*c*) The DPRE shall be observed by the Authority in the conduct of a Skill test at least once each 12 calendar months.

2.10.3.5. *Privileges*

(*a*) The DPRE may conduct Skill test for the Senior Parachute Rigger and Master Parachute Rigger license in accordance with approved STS standard.

(*b*) The DPRE may conduct or monitor any portion of a computerised knowledge test.

2.10.3.6. *Validity*

(*a*) The parachute rigger examiner designation shall be valid for one year.

2.10.3.7. *Renewal*

(*a*) The parachute rigger examiner designation may be renewed by the Authority if :

(1) The need for the designation remains valid.

(2) The performance of the examiner has been satisfactory.

(3) The examiner has attended the DPRE seminar conducted by the Authority in the previous 12-month period.

2.11. MEDICAL PROVISIONS FOR LICENSING

2.11.1. *General*.

2.11.1.1. *Applicability*

(*a*) This Section prescribes the requirements and procedures for issuing, renewing and re-issuing Class 1, Class 2 and Class 3 medical certificates.

(*b*) The Authority shall apply, as part of its State safety programme, basic safety management principles to the medical assessment process of licence holders, that as minimum include :

(*i*) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk ; and

(*ii*) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

2.11.1.2. *Medical Fitness.*

(*a*) The applicants for a flight crew licence and air traffic controller licence shall hold a medical certificate issued in accordance with this Part.

(*b*) A flight crew member or air traffic controller shall not exercise the privileges of his/her licence unless he/she holds a current medical certificate appropriate to the licence.

2.11.1.3. *Authorised Aviation Medical Examiners* (*AAME*).

(*a*) Subject to compliance with the requirements specified in this Part, the Authority will designate and authorise qualified and licensed physicians in the practice of medicine, to be authorised as an AAME and conduct medical examinations of fitness of applicants for the issue, renewal or re-issue of the licences or ratings specified in this Part. AAMEs may be designated outside of Nigeria.

(*b*) AAMEs shall have had, or shall receive :

(1) Basic training in aviation medicine for Class 2 and 3 medical examinations on the subjects listed in IS 2.11.1.3. (*a*) ; and

(2) Advance training in aviation medicine for Class 1 medical examinations on the subjects listed in IS 2.11.1.3(*b*).

(3) AAMEs shall have received training in aviation medicine and shall receive refresher training at regular intervals. Before designation, medical examiners shall demonstrate adequate competency in aviation medicine.

(*c*) AAMEs shall have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

Note.—Examples of practical knowledge and experience are flight experience, simulator experience, on-site observation or any other hands-on experience deemed by the Authority to meet this requirement.

(*d*) The authorisation of an AAME is valid for one year. The AAME shall have completed at least 10 examinations for a medical certificate per year. Re-authorisation shall be at the discretion of the Authority.

(*e*) Having completed the medical examination of the applicant in accordance with this part, the AAME shall coordinate the results of the examination and submit a signed report, or equivalent, to the Authority, in accordance with the Authority's requirements, detailing the results of the examination and evaluating the findings with regard to medical fitness.

(*f*) If the medical examination is carried out by two or more AAMEs, the Authority shall appoint one of these to be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

(*g*) The Authority retains the right to reconsider any action of an AAME.

(*h*) If the medical report is submitted to the Authority in electronic format, adequate identification of the examiner shall be established.

(*i*) AAMEs shall be required to submit sufficient information to the Authority to enable it undertake Medical Assessment audits.

Note.—The purpose of such auditing is to ensure that AAMEs meet applicable standards for good medical practice and aeromedical risk assessment.

2.11.1.4. Aviation Medical Examinations

(*a*) Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the AAME a declaration stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. They shall indicate to the AAME whether a Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

(*b*) Each applicant for a medical certificate shall provide the AAME with a personally certified statement of medical facts concerning personal, familial and hereditary history.

(*c*) Each applicant for a medical certificate shall produce proof of identification.

(*d*) The applicant shall be made aware of the necessity for giving a statement that is as complete and accurate as the applicant's knowledge permits, and any false declaration to an AAME made by an applicant for a licence or rating shall be reported to the Authority for such action as may be considered appropriate.

(*e*) The applicant shall complete the appropriate application form as detailed in IS 2.11.1.3.

Special Circumstances.

2.11.1.5.—(*a*) If the medical requirements prescribed in Part 2 for a particular licence are not met, the appropriate medical certificate will not be issued, renewed or re-issued unless the following conditions are fulfilled :

(1) Accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardise flight safety ;

(2) Relevant ability, skill and experience of the applicant and operational conditions have been given due consideration ; and

(3) The licence is endorsed by the Authority with any special limitation or limitations when the safe performance of the licence holder's duties is dependent on compliance with such limitation or limitations.

(*b*) The AAME shall report to the Authority any individual case where, in the AAME's judgement, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence being applied for, or held, is not likely to jeopardise flight safety.

Decrease of Medical Fitness.

2.11.1.6.—(*a*) Holders of licences provided for in this Part shall not exercise the privileges of their licences and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

(*b*) Licence holders shall inform the Authority of any decrease in medical fitness of a duration of more than 20 days or which requires continued treatment with prescribed medication or which has required hospital treatment.

(*c*) The Authority shall ensure that licence holders are provided with clear guidelines on medical conditions that may be relevant to flight safety and when to seek clarification or guidance from an AAME or the Authority.

(*d*) The Authority shall, as far as practicable, ensure that licence holders do not exercise the privileges of their licences and related ratings during any period in which their medical fitness has, from any cause, decreased to an extent that would have prevented the issue or renewal of their Medical Assessment.

Use of Psychoactive Substances.

2.11.1.7.—(*a*) Holders of licences provided for in this Part shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.

(*b*) Holders of licences provided for in this Part shall not engage in any problematic use of substances.

(*c*) The Authority will ensure, as far as practicable, that all licence holders who engage in any kind of problematic use of substances are identified and removed from their safety-critical functions. Return to the safety-critical functions may be considered after successful treatment or, in cases where no treatment is necessary, after cessation of the problematic use of substances and upon determination that the person's continued performance of the function is unlikely to jeopardize safety.

Medical Certificate.

2.11.1.8.—(*a*) The medical certificate shall be in a form and manner prescribed by the Authority. The items required on the licence are indicated in IS 2.11.1.8.

(*b*) Issue of medical certificates.

(1) A medical certificate will be issued to any person who meets the medical requirements prescribed in this Subpart, based on medical examination and evaluation of the applicant's history and condition.

(*i*) The issue of the Class 1 medical certificate may be specifically delegated to an AAME.

(*ii*) The issue of Class 2 and 3 medical certificates may be delegated to any authorised AAME.

(2) Each person to be issued a medical certificate shall undergo a medical examination based on the physical and mental requirements contained in this Subpart.

(3) Any person who does not meet the medical requirements of this Subpart may apply for the discretionary issuance of a certificate under 2.11.1.5 of these regulations.

(*c*) *Validity* :

(1) The validity period of the medical certificate shall be :

(*i*) 12 months for the Class 1 for the CPL, MPL and ATPL licences.

(*ii*) 12 months for the Class 2 for the FE licences.

(*iii*) 60 months for the Class 2 for the PPL licences.

(*iv*) 24 months for the Class 2 for the Cabin Crew licences.

(*v*) 24 months for the Class 2 for the SPA.

(*vi*) 48 months for the Class 3 for the air traffic controller licence.

(2) The exceptions for the validity period of the medical certificates are :

(*i*) When the holders have passed their 40th birthday :

(*a*) The 60 month interval specified for the PPL and the 48th month interval specified for the air traffic controller licence shall be reduced to 24 months ; and

(*b*) The 12-month interval specified for the CPL and ATPL who are carrying passengers in single-pilot operations shall be reduced to 6 months.

(*c*) The 24-month interval specified for the Cabin Crew licence and SPA shall be reduced to 12 months.

(*ii*) When holders have passed their 50th birthday :

(*a*) The 24-month interval specified for the PPL and air traffic controller licence shall be reduced to 12 months.

(*iii*) When holders have passed their 60th birthday :

(*a*) The 12-month interval specified for the CPL, MPL, and ATPL who are engaged in commercial air transport operations shall be reduced to 6 months.

Note.—The periods of validity listed above are based on the age of the applicant at the time of undergoing the medical examination.

(3) For initial issuance of the medical certificate, the period of validity shall begin on the date the medical examination is performed. The period of validity shall for the last month counted, include the day that has the same calendar number as the date of the medical examination or, if that month has no day with that number, the last day of that month.

(4) The period of validity of a Medical Assessment may be extended, at the discretion of the Authority, up to 45 days.

Note.—It is advisable to let the calendar day on which the Medical Assessment expires remain constant year after year by allowing the expiry date of the current Medical Assessment to be the beginning of the new validity period under the proviso that the medical examination takes place during the period of validity of the current Medical Assessment but no more than 45 days before it expires.

(5) The period of validity of a Medical Assessment may be reduced when clinically indicated.

(d) Renewal or re-issue of a medical certificate.

(1) The requirements to be met for the renewal or re-issue of a medical certificate are the same as those for the initial certificate except where otherwise specifically stated.

(2)The renewal of the Class 1, 2 and 3 medical certificate may be delegated to the authorised AAME.

(3) Re-issue of the Class 1 medical certificate will be done by the Authority.

(4) Re-issue of the Class 2 and 3 medical certificate may be delegated to the authorised AAME.

(*e*) Limitation or denial.

(1) The Authority may for medical reasons limit or deny a medical certificate. The Authority will describe the medical reasons for the limitation or denial in a notice to the applicant.

(*f*)Suspension or revocation of a medical certificate.

(1) The Authority may in accordance with paragraph 2.2.9 of these regulations, suspend or revoke a medical certificate issued, if it is established that an applicant or a certificate holder has not met, or no longer meets the requirements of Part 2.

2.11.1.9.—(*a*) Medical confidentiality shall be respected at all times. Medical confidentiality.

(*b*) All medical reports and records shall be securely held with accessibility restricted to authorised personnel.

(*c*) When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to relevant officials of the Authority.

2.11.1.10. —(*a*) The competence of an AAME shall be evaluated periodically by the Medical Assessor. Medical Assessor.

(*b*) The Authority shall use the services of Medical Assessors to evaluate reports submitted to the Authority by AAMEs.

2.11.1.11.—(*a*) The prescribed re-examination of a licence holder operating in an area distant from Authorised Aviation medical examination facilities may be deferred at the discretion of the Authority, provided that such deferment shall only be made as an exception and shall not exceed : Circumstances in which a Medical Examination may be Deferred.

(1) a single period of six months in the case of a flight crew member of an aircraft engaged in non-commercial operations ;

(2) two consecutive periods each of three months in the case of a flight crew member of an aircraft engaged in commercial operations provided that in each case a favourable medical report is obtained after examination by an Authorised Aviation medical examiner of the area concerned, or, in cases where such an Authorised Aviation medical examiner is not available, by a physician legally qualified to practise medicine in that area. A report of the medical examination shall be sent to the Authority ;

(3) in the case of a private pilot, a single period not exceeding 24 months where the medical examination is carried out by a medical examiner whose designation meets the requirement of ICAO Annex 1.2.4.5 by the Contracting State in which the applicant is temporarily located. A report of the medical examination shall be sent to the Authority.

2.11.2. Medical Requirements.

2.11.2.1. General.

(*a*) An applicant for a Medical Certificate issued in accordance with this Part, shall undergo a medical examination based on the following requirements :

(1) Physical and mental ;

(2) Visual and colour perception ; and

(3) Hearing.

2.11.2.2. Physical and Mental Requirements.

(*a*) An applicant for any class of Medical Assessment shall be required to be free from :

(1) Any abnormality, congenital or acquired ; or

(2) Any active, latent, acute or chronic disability ; or

(3) Any wound, injury or sequela from operation ; or

(4) Any effect or side-effect of any prescribed or non-prescribed therapeutic medication taken; such as would entail a degree of functional incapacity which is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.

Note.—Use of herbal medication and alternative treatment modalities requires particular attention to possible side-effects.

2.11.2.3. Visual Acuity Test Requirements :

(*a*) Visual acuity tests must be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60cd/m^2).

(*b*) Visual acuity must be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.

2.11.2.4. Colour Perception Requirements.

(*a*) The applicant shall be required to demonstrate the ability to perceive readily those colours the perception of which is necessary for the safe performance of duties.

(*b*) The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission of Illumination (CIE).

(*c*) An applicant obtaining a satisfactory result as prescribed by the Authority shall be assessed as fit. An applicant failing to obtain a satisfactory result in such a test shall be assessed as unfit unless able to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights. Applicants who fail to meet these criteria shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

(*d*) Sunglasses worn during the exercise of the privileges of the licence or rating held shall be non-polarizing and of a neutral grey tint.

Hearing Test Requirements.

2.11.2.5.—(*a*) Applicants shall be required to demonstrate hearing performance sufficient for the safe exercise of their licence and rating privileges.

(*b*) The hearing test may be conducted using a pure tone audiometer or alternate method that provides equivalent results. This test shall be performed at the first medical examination and then at specified intervals according to the class of medical examination and age of the applicant.

(*c*) If a pure tone audiometer is used, the reference zero for calibration is that of the International Organisation for Standardisation (ISO) Recommendation R389, 1964.

(*d*) For hearing tests where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests under the following conditions.

(1) A quiet room is a room in which the intensity of the background noise is less than 35 dB(*A*) when measured on "slow" response of an "A"-weighted sound level meter.

(2) The sound level of an average conversational voice at 1 m from the point of output is 60dB(*A*) and that of a whispered voice is 45dB(*A*). At 2 m from the speaker, the sound is 6 dB(*A*) lower.

(*e*) The holder of a PPL with an instrument rating shall meet the hearing requirements for the Class 1 medical certificate.

2.11.2.6. Class 1 Medical Certificate.

(*a*) Certificate Issue and Renewal.

(1) An applicant for CPL, Multi-crew pilot licence or ATPL shall undergo an initial medical examination for the issue of a class 1 medical certificate.

(2)(*i*) Except where otherwise stated in this part, holders of CPL, Multi-crew pilot or ATPL shall have their class 1 medical certificate renewed at intervals not exceeding those specified in this subpart.

(*ii*) In alternate years, for Class 1 applicants under 40 years of age, the Authority shall, at its discretion, allow AAMEs to omit certain routine examination items related to the assessment of physical fitness, whilst increasing the emphasis on health education and prevention of ill health.

(3) A Class 1 medical certificate will be issued when the applicant complies with the requirements of this Part.

(*b*) Physical and Mental Requirements :

(1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

(2)(*A*) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the licence applied for or held :

(*i*) An organic mental disorder ;

(*ii*) A mental or behavioral disorder due to use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances ;

(*iii*) Schizophrenia or a schizotypal or delusional disorder ;

(*iv*) A mood (affective) disorder ;

(*v*) A neurotic, stress-related or somatoform disorder ;

(*vi*) A behavioral syndrome associated with physiological disturbances or physical factors ;

(*vii*) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts ;

(*viii*) Mental retardation ;

(*ix*) A disorder of psychological development ;

(*x*) A behavioral or emotional disorder, with onset in childhood or adolescence ; or

(*xi*) A mental disorder not otherwise specified.

(*B*) An applicant with depression, being treated with antidepressant medication, shall be assessed as unfit unless the Medical Assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(3) The applicant shall have no established medical history or clinical diagnosis of any of the following :

(*i*) A progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges ;

(*ii*) Epilepsy ; or

(*iii*) Any disturbance of consciousness without a satisfactory medical explanation of the cause.

(4) The applicant shall not have suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(5) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.

(6) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(8) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate.

(9)(*i*) Electrocardiography shall be included in re-examination of applicants over the age of 50 no less frequently than annually.

(*ii*) Electrocardiography shall be included in re-examinations of applicants between the ages of 30 and 50 no less frequently than every two years.

(10) The systolic and diastolic blood pressures shall be within normal limits.

(11) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion is compatible with the safe exercise of the applicant's licence and rating privileges.

(12) There shall be no significant functional or structural abnormality of the circulatory system.

(13) There shall be no acute disability of the lungs or active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.

(14) Radiography shall form a part of the initial chest examination.

(15) Applicant's with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(16) Applicant's with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

(17) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(18) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(19) Applicants with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.

(20) Applicants with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(21) The applicant shall be completely free from those hernias that might give rise to incapacitating symptoms.

(22) Applicants with sequela of disease of, or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstructions due to stricture or compression shall be assessed as unfit.

(23) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the Medical Assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.

(24) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(25) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

(26) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(27) Applicants with disease of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(28) Applicants with renal or genitourinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(29) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(30) Applicants with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular any obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with the best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(31) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(32) Applicants who are seropositive for Human Immunodeficiency Virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Note : Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

(33) Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(34) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(35) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with the provisions of this subpart, the fit assessment shall be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

(36) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

(37) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(38) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(39) There shall be :

(*i*) No disturbance of vestibular function ;

(*ii*) No significant dysfunction of the Eustachian tubes ; and

(*iii*) No unhealed perforation of the tympanic membranes.

(40) A single dry perforation of the tympanic membrane need not render the applicant unfit.

(41) There shall no nasal obstruction and no malformation nor disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(42) Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

(*c*) Visual Requirements :

(1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

(2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that :

(*i*) Such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held ; and

(*ii*) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

(3) Applicants may use contact lenses to meet the requirement of (b) provided that :

(*i*) The lenses are monofocal and non-tinted ;

(*ii*) The lenses are well tolerated ; and

(*iii*) A pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

(5) Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical certificate and every five years thereafter.

(6) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(7) The applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correcting already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

(8) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(9) The applicant shall be required to have normal fields of vision.

(10) The applicant shall be required to have normal binocular function.

(11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.

(*d*) Hearing Requirements :

(1)The applicant shall be tested by pure-tone audiometry.

(*i*) At the first issue of the Medical Assessment ;

(*ii*) At least once every five years up to the age of 40 years ;

(*iii*) At least once every two years after the age of 40 years.

(2) The applicant shall not have a hearing loss in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz. However, an applicant with a hearing loss greater than the above may be declared fit provided that :

(*i*) The applicant has a hearing performance in each ear separately equivalent to that of a normal person, against a background noise that simulates the masking properties of flight deck noise upon speech and beacon signals ; and

(*ii*) The applicant has the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner, with the back turned to the examiner.

(3) Alternatively, a practical hearing test conducted in flight in the cockpit of an aircraft of the type for which the applicant's licence and ratings are valid may be used.

Note 1.—It is important that the background noise be representative of the noise in the cockpit of the type of aircraft for which the applicant's licence and ratings are valid.

Note 2.—In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

2.11.2.7. Class 2 Medical Certificate.

(*a*) Certificate issue and renewal.

(1) An applicant for a PPL, a FE or FN licence shall undergo an initial medical examination for the issue of a Class 2 Medical Certificate.

(2) Except where otherwise stated in this subpart, holders of a PPL, a FE or a FN licence shall have their Class 2 Medical Certificate renewed at intervals not exceeding those specified in this subpart.

(3) A Class 2 Medical Certificate will be issued when the applicant complies with the requirements of this Part.

(*b*) Physical and mental requirements.

(1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

(2)(*a*) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the licence applied for or held :

(*i*) An organic mental disorder ;

(*ii*) A mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances ;

(*iii*) Schizophrenia or a schizotypal or delusional disorder ;

(*iv*) A mood (affective) disorder ;

(*v*) A neurotic, stress-related or somatoform disorder ;

(*vi*) A behavioural syndrome associated with physiological disturbances or physical factors ;

(*vii*) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts ;

(*viii*) Mental retardation ;

(*ix*) A disorder of psychological development ;

(*x*) A behavioural or emotional disorder, with onset in childhood or adolescence ; or

(*xi*) A mental disorder not otherwise specified.

(*B*) An applicant with depression, being treated with antidepressant medication, shall be assessed as unfit unless the Medical Assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(3) The applicant shall have no established medical history or clinical diagnosis of any of the following :

(*i*) A progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges ;

(*ii*) Epilepsy ; or

(*iii*) Any disturbance of consciousness without satisfactory medical explanation of cause.

(4) The applicant shall not have suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(5) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.

(6) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarection or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(8) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate :

(*i*) After the age of 40 ; and

(*ii*) In re-examinations every two years after the age of 50.

(9) The systolic and diastolic blood pressures shall be within normal limits.

(10) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion is compatible with the safe exercise of the applicant's licence and rating privileges.

(11) There shall be no significant functional or structural abnormality of the circulatory system.

(12)(*i*) There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.

(*ii*) Chest radiography shall form part of the initial and periodic examinations in cases where asymptomatic pulmonary disease can be expected.

(13) Applicant's with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(14) Applicant's with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

(15) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(16) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(17) Applicants with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.

(18) Applicants with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.

(19)The applicant shall be completely free from those hernias that might give rise to incapacitating symptoms.

(20) Applicants with sequelae of disease of, or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacity in flight, in particular any obstructions due to structure or compression shall be assessed as unfit.

(21) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the Medical Assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.

(22) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(23) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

(24) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(25) Applicants with disease of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(26) Applicants with renal or genitor-urinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(27) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(28) Applicants with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular any obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with the best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(29) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(30) Applicants who are seropositive for Human Immunodeficiency Virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Note : Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

(31) Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(32) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(33) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with this subpart, the fit assessment shall be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

(34) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her licence and ratings.

(35)The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(36) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(37) There shall be :

(*i*) No disturbance of vestibular function ;

(*ii*) No significant dysfunction of the Eustachian tubes ; and

(*iii*) No unhealed perforation of the tympanic membranes.

(38) A single dry perforation of the tympanic membrane need not render the applicant unfit.

(39) There shall no nasal obstruction and no malformation nor disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(40) Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

(*c*) Visual Requirements.

(1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

(2) Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

(*i*) Such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held ; and

(*ii*) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

(3) Applicants may use contact lenses to meet the requirement of (*b*) provided that :

(*i*) The lenses are monofocal and non-tinted ;

(*ii*) The lenses are well tolerated ; and

(*iii*) A pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

(5) Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical certificate and every five years thereafter.

(6) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(7) The applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correcting already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

(8) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(9) The applicant shall be required to have normal fields of vision.

(10) The applicant shall be required to have normal binocular function.

(11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.

(*d*) Hearing Requirements.

(1) The applicant shall be tested by pure-tone audiometry.

(*i*) At the initial medical examination.

(*ii*) At least once every two years after the age of 50 years.

(2) When tested by pure-tone audiometry, an applicant with a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz, shall be assessed as unfit.

(3) The applicant shall have the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner, with the back turned to the examiner or be assessed as unfit.

(4) The applicant who holds a PPL with an IR shall meet the hearing requirements for a Class 1 medical certificate.

(5) An applicant who does not meet the requirements in 2.11.2.7(*d*)(2) or 2.11.2.7(*d*) (3) shall undergo further testing in accordance with 2.11.2.6(*d*)(2)(*i*).

2.11.2.8. Class 3 Medical Certificate.

(*a*) Certificate issue and renewal.

(1) An applicant for an Air Traffic Controller licence shall undergo an initial medical examination for the issue of a Class 3 Medical Certificate.

(2) Except where otherwise stated in this subpart, holders of an Air Traffic Controller licence shall have their Class 3 Medical Certificate renewed at intervals not exceeding those specified in this subpart.

(3) A Class 3 Medical Certificate will be issued when the applicant complies with the requirements of this Part.

(*b*) Physical and mental requirements.

(1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

(2)(*a*) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the licence applied for or held :

(*i*) An organic mental disorder ;

(*ii*) A mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances ;

(*iii*) Schizophrenia or a schizotypal or delusional disorder ;

(*iv*) A mood (affective) disorder ;

(*v*) A neurotic, stress-related or somatoform disorder ;

(*vi*) A behavioural syndrome associated with physiological disturbances or physical factors ;

(*vii*) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts ;

(*viii*) Mental retardation ;

(*ix*) A disorder of psychological development ;

(*x*) A behavioural or emotional disorder, with onset in childhood or adolescence ; or

(*xi*) A mental disorder not otherwise specified.

(*b*) An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(3) The applicant shall have no established medical history or clinical diagnosis of any of the following :

(*i*) A progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges ;

(*ii*) Epilepsy ; or

(*iii*) Any disturbance of consciousness without satisfactory medical explanation of cause.

(4) The applicant shall not have suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(5) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.

(6) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(8) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate and in re-examinations every two years after the age of 50.

(9) The systolic and diastolic blood pressures shall be within normal limits.

(10) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion is compatible with the safe exercise of the applicant's licence and rating privileges.

(11) There shall be no significant functional or structural abnormality of the circulatory system.

(12) There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms.

Note.—Chest radiography is usually not necessary but may be indicated in cases where asymptomatic pulmonary disease can be expected.

(13) Applicant's with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(14) Applicant's with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

(15) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(16) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(17) Applicants with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.

(18) Applicants with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.

(19) Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstructions due to stricture or compression, shall be assessed as unfit.

(20) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa, with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the Medical Assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation.

(21) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(22) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

(23) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(24) Applicants with disease of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(25) Applicants with renal or genitor-urinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

(26) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(27) Applicants with sequelae of disease or surgical procedures on the kidneys or the genito-urinary tract, in particular any obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with the best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(28) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(29) Applicants who are seropositive for Human Immunodeficiency Virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Note : Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

(30) Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(31) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(32) During the gestational period, precautions shall be taken for the timely relief of an air traffic controller in the event of early onset of labour or other complications.

(33) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with this subpart, the fit assessment shall be limited to the period until the end of the 34th week of gestation.

(34) Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

(35) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(36) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(37) There shall be no malformation or any disease of the nose, buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(38) Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

(*c*) Visual Requirements.

(1) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

(2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that :

(*i*) Such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held ; and

(*ii*) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

Note.—An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

(3) Applicants may use contact lenses to meet the requirement of (*b*) provided that :

(*i*) The lenses are monofocal and non-tinted ;

(*ii*) The lenses are well tolerated ; and

(*iii*) A pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

(5) Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Certificate and every five years thereafter.

(6) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(7) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by (*b*), the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correcting already prescribed in accordance with (*b*); if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 2.—An applicant who needs near correction to meet the requirement will require “look-over”, bifocal or perhaps multi-focal lenses in order to read radar screens, visual displays and written or printed material and also to make use of distant vision, through the windows, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) may be acceptable for certain air traffic control duties. However, it should be realized that single-vision near correction significantly reduces distant visual acuity.

Note 3.—Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the air traffic control duties the applicant is likely to perform.

(8) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(9) The applicant shall be required to have normal fields of vision.

(10) The applicant shall be required to have normal binocular function.

(11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

(*d*) Hearing Requirements.

(1) The applicant shall be tested by pure-tone audiometry.

(*i*) At the initial medical examination.

(*ii*) At least once every four years up to the age of 40 years.

(*iii*) At least once every two years after the age of 40 years.

(2)The applicant, when tested on a pure-tone audiometer, shall not have a hearing loss in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz.

(3) An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates that experience in a normal air traffic control working environment.

(4) Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant's licence and ratings are valid may be used.

NIGERIA CIVIL AVIATION REGULATIONS

PART 2—IMPLEMENTING STANDARDS

Issue, Renewal and Re-issue of Licences, Ratings, Authorisations, Designations, and Certificates.

IS 2.2.1.—(*a*) Issue, renewal and re-issue of licences, ratings, authorisations, designations and certificates will take place when the applicant meets the requirements of Part 2 for issue, renewal and re-issue for these licences, ratings authorisations and certificates.

(*b*) Issue, renewal and re-issue of licences, ratings, authorisations, designations and certificates will be performed by the Authority.

(*c*) Notwithstanding (*b*), renewal of ratings and category II/III pilot authorisations may be performed by the Examiner, when delegated by the Authority.

(*d*) Notwithstanding (*b*), renewal of medical certificates may be performed by the AAME, when delegated by the Authority.

(*e*) Application for the issue, renewal and re-issue of licences, ratings, authorisations, designations or certificates by the Authority shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority. This form must be submitted to the Authority at least 14 days before the expiry date.

Language Proficiency.

IS 2.2.2.—(*a*) General.

(1) To meet the language proficiency requirements contained in 2.2.2, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the Authority, compliance with the holistic descriptors in paragraph (*b*) below and with the Operational Level (Level 4) of the Language Proficiency Rating Scale as mentioned in paragraph (*c*) below.

(2) Holistic descriptors: Proficient speakers shall :

(*i*) Communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations ;

(*ii*) Communicate on common, concrete and work-related topics with accuracy and clarity ;

(*iii*) Use appropriate communicative strategies to exchange messages and to recognise and resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or work-related context ;

(*iv*) Handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar ; and (*v*) Use a dialect or accent which is intelligible to the aeronautical community.

(3) Rating scale :

(*i*) Pre-elementary Level (Level 1) :

(*a*) *Pronunciation* : Performs at a level below the Elementary Level.

(*b*) *Structure* : Performs at a level below the Elementary Level.

(*c*) *Vocabulary* : Performs at a level below the Elementary Level.

(*d*) *Fluency* : Performs at a level below the Elementary Level.

(*e*) *Comprehension* : Performs at a level below the Elementary Level.

(*f*) *Interactions* : Performs at a level below the Elementary Level.

(*ii*) Elementary Level (Level 2) :

(*a*) *Pronunciation* : Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.

(*b*) *Structure* : Shows only limited control of a few simple memorized grammatical structures and sentence patterns.

(*c*) *Vocabulary* : Limited vocabulary range consisting only of isolated words and memorized phrases.

(*d*) *Fluency* : Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.

(*e*) *Comprehension* : Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.

(*f*) *Interactions* : Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.

(*iii*) Pre-operational Level (Level 3) :

(*a*) *Pronunciation* : Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.

(*a*) *Structure* : Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.

(*c*) *Vocabulary* : Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work-related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.

(*d*) *Fluency* : Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.

(*e*) *Comprehension* : Comprehension is often accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.

(*f*) *Interaction* : Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.

(4) Operational Level (Level 4) :

(*i*) *Pronunciation* : Pronunciation, stress, rhythm and intonation are influenced by the first language or regional variation but only sometimes interfere with understanding.

(*ii*) *Structure* : Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.

(*iii*) *Vocabulary* : Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.

(*iv*) *Fluency* : Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.

(*v*) *Comprehension* : Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

(*vi*) *Interactions* : Responses are usually immediate, appropriate and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming or clarifying.

(5) Extended Level (Level 5) :

(*i*) *Pronunciation* : Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.

(*ii*) *Structure* : Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.

(*iii*) *Vocabulary* : Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.

(*iv*) *Fluency* : Able to speak at length with relative ease on familiar topics, but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.

(*v*) *Comprehension* : Comprehension is accurate on common, concrete, and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.

(*vi*) *Interactions* : Responses are immediate, appropriate, and informative. Managers the speaker/listener relationship effectively.

(6) Expert Level (Level 6) :

(*i*) Pronunciation: Pronunciation, stress, rhythm, and intonation, thought possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.

(*ii*) *Structure* : Both basic and complex grammatical structures and sentence patterns are consistently well controlled.

(*iii*) *Vocabulary* : Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.

(*iv*) *Fluency* : Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.

(*v*) *Comprehension* : Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.

(*vi*) *Interactions* : Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately.

IS 2.2.3.1. Credit for Military Pilots.

(*a*) Requirements for a military pilot to meet the requirements of 2.2.3.1.

(*b*) Military pilots on active flying status within the past 12 months. The holder of a military pilot licence (or certificate) who has been on active flying status within the 12 months before applying shall :

(1) Pass a knowledge test on the appropriate parts of these regulations that apply to pilot privileges and limitations, air traffic and general operating rules, and accident reporting rules ;

(2) Present documentation showing compliance with the requirements of paragraph (*c*) of this subsection for at least one aircraft category rating ; and

(3) Present documentation showing that the applicant is or was, at any time during the 12 calendar months before the month of application the holder of a military pilot licence (or certificate) on active flying status in an armed force of Nigeria.

(*c*) Aircraft category, class and type ratings. The Authority may issue to the holder of a military pilot licence (or certificate) an aircraft category, class or type rating to a commercial pilot licence if the pilot present documentary evidence that shows satisfactory accomplishment of :

(1) A military pilot check and instrument proficiency check of Nigeria] in that aircraft category, class or type, if applicable, as PIC during the 12 calendar months before the month of application ; and

(2) At least 10 hours of PIC time in that aircraft category, class or type, if applicable, during the 12 calendar months before the month of application.

(*d*) *Instrument Rating*.—The holder of a military pilot licence (or certificate) may apply for an aeroplane or helicopter instrument rating to be added to his or her commercial pilot licence if the pilot has, within the 12 calendar months preceding the month of application :

(1) Passed an instrument proficiency check by an armed force of Nigeria] in the aircraft category for the instrument rating sought ; and

(2) Received authorisation from an armed force of Nigeria to conduct IFR flights on airways in that aircraft category and class for the instrument rating sought.

(*e*) *Aircraft type Rating*. The Authority will issue an aircraft type rating only for aircraft types that the Authority has certified for civil operations.

(*f*) Aircraft type rating placed on an airline transport pilot licence. The Authority may issue to the holder of a military pilot licence (or certificate) who holds an airline transport pilot licence an aircraft type rating provided that the pilot :

(1) Holds a category and type rating for that type of aircraft at the airline transport pilot licence level ; and

(2) Passed an official military pilot of Nigeria check and instrument proficiency check in that type of aircraft as PIC during the 12 calendar months before the month of application.

(*g*) Evidentiary documents. The Authority may accept the following documents as satisfactory evidence of military pilot status.

(1) An official identification card issued to the pilot by an armed force to demonstrate membership in the armed forces.

(2) An original or a copy of a certificate of discharge or release from an armed force of Nigeria.

(3) At least one of the following :

(*i*) An order of an armed force of Nigeria to flight status as a military pilot ;

(*ii*) An armed force form or logbook showing military pilot status ; or

(*iii*) An order showing that the applicant graduated from a military pilot school of Nigeria and received a rating as a military pilot.

(4) A certified armed force logbook or an appropriate official armed force form or summary to demonstrate flight time in military aircraft as a member of an armed force of Nigeria.

(5) An official armed force of Nigeria] record of a military designation as PIC.

(6) An official record of satisfactory accomplishment of an instrument proficiency check during the 12 calendar months preceding the month of application.

IS : 2.2.4.1(*c*)(3)

LICENCE	*LICENCE*	*VALIDATION PRIVILEGES*
ATPL(A)	> 1 500 hours as PIC in multi-pilot * certificated aeroplanes	Commercial air transport in multi-pilot aeroplanes as PIC
ATPL(PL)	>1500 hours as PIC in multi-pilot certificated powered-lift or 1500 hours in multi-pilot operations in a combination of powered-lift; aeroplane and helicopter aircraft as acceptable to the Authority	Commercial air transport in multi-pilot powered-lift as PIC
ATPL(H)	>1 000 hours as PIC on multi-pilot helicopters	Commercial air transport multi-pilot helicopters as PIC
ATPL(A) or CPL(A)/IR	> 500 hours as PIC or co-pilot on multi-pilot aeroplanes	Commercial air transport in multi-pilot aeroplanes as co-pilot
ATPL(PL) or CPL(PL)/IR	> 500 hours as PIC or co-pilot on multi-pilot powered-lift	Commercial air transport in multi-pilot powered-lift as co-pilot
ATPL(H) or CPL(H)/IR	> 500 hours as PIC or co-pilot on multi-pilot helicopters	Commercial air transport in multi-pilot helicopters as co-pilot
CPL(A)/IR	> 1 000 hours as PIC in commercial air transport since gaining an IR	Commercial air transport in single-pilot aeroplanes as PIC
CPL(H)/IR	> 1 000 hours as PIC in commercial air transport since gaining an IR	Commercial air transport in single-pilot helicopters as PIC
CPL(A)	> 700 hours in aeroplanes other than gliders, including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months	Activities in aeroplanes other than commercial air transport
CPL(H)	> 700 hours in helicopters including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months	Activities in helicopters other than commercial air transport
CPL(PL)	>700 hours in powered-lift (or combination of powered-lift, aeroplane and helicopter as acceptable to the Authority) including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months	Activities in powered-lift other than commercial air transport

LICENCE	*LICENCE*	*VALIDATION PRIVILEGES*
CPL(AS)	> 250 hours as PIC in commercial air transport including 50 hours in AS within the last 12 months	Commercial air transport in airships as PIC under IR and VFR conditions
CPL(B)	>50 hours as PIC in commercial air transport of which 35 hours in B within the last 12 months	Commercial air transport in balloons as PIC
CPL(G)	>250 hours as PIC in commercial air transport, including of which 50 must be in G within the past 12 months	Commercial air transport in gliders as PIC
PPL(A)/IR	> 100 hours PIC instrument flight time	Private flights under IFR
PPL(H)/IR	> 100 hours PIC instrument flight time	Private flights under IFR
PPL(PL)/IR	> 100 hours PIC instrument flight time	Private flights under IFR
Flight Engineer	> 1 500 hours as flight engineer on aeroplanes in commercial air transport	Commercial air transport in aeroplanes as flight engineer
Flight Engineer	> 1 000 hours as flight engineer on aeroplanes in other than commercial air transport	Other than commercial air transport in aeroplanes as flight engineer

Note : The term multi-pilot is used to indicate experience in an aircraft required to be operated with a co-pilot.

Note : > = greater than

IS 2.2.4.3.—(*a*) The Authority should, before making the agreement mentioned in 2.2.4.3 (*a*)(3) be convinced, that the other Contracting State issues licences in conformity with at least this Part 2 by conducting a regulatory comparison of the licensing systems and requirements.

Procedures for Validation of Flightcrew Licences by Reliance upon the Licensing System of Another Contracting State.

(*b*) An inspector, legal counsel and/ or licensing subject matter experts from Nigeria, or from another Contracting State delegated by the Authority, must visit the other Contracting State to be convinced that the licensing system in the other Contracting State is in conformity with at least this Part 2. A report describing the bases for the decision shall be made to the Authority. The report, and the regulatory comparison noted in item (*b*) shall serve the basis for a government-to-government agreement between the involved States regarding use or reliance of the licensing system.

(*c*) An Air Law test must be arranged if the Air Law system of Nigeria] is different from the Air Law system from the other Contracting State. Other areas that may require knowledge testing are meteorology, operational procedures and radiotelephony if those areas are different between Nigeria and the other Contracting State.

(*d*) Application for the validation certificate shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.

IS 2.2.4.4.—(*a*) The Authority that issues a converted licence based on a licence from another Contracting State remains responsible for the converted licence.

Procedures for Conversion of Flightcrew Licences by Reliance upon the Licensing System of Another Contracting State.

(*b*) The Authority should, before making the agreement mentioned in 2.2.4.4 (*a*)(3) be convinced, that the other Contracting State issues licences in conformity with at least this Part 2 by conducting a regulatory comparison of the licensing systems and requirements.

(*c*) An inspector, legal counsel and/ or licensing subject matter experts from Nigeria or from another Contracting State delegated by the Authority, must visit the other Contracting State to be convinced that the licensing system in the other Contracting State is in conformity with at least this Part 2. A report describing the bases for the decision shall be made to the Authority. The report, and the regulatory comparison noted in item (b) shall serve the basis for a government-to-government agreement between the involved States regarding use or reliance of the licensing system.

(1) An Air Law test must be arranged if the Air Law system of Nigeria is different from the Air Law system from the other Contracting State. Other areas that may require knowledge testing are meteorology, operational procedures and radiotelephony if those areas are different between Nigeria and the other Contracting State.

(*d*) Renewal and re-issue of converted licences and ratings :

(1) when examiners are available in Nigeria to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the licence or rating(s), these tests/checks will be performed by the authorised examiners of the Authority.

(2) when examiners are not available in Nigeria to perform proficiency checks for the renewal of the rating(s) or skill test for the re-issue of the licence or rating(s), the availability of examiners for these tests/checks from the other Contracting State can be arranged in the agreement mentioned in 2.2.4.4 (*a*)(3).

(*e*) Application for the conversion of a licence from another Contracting State shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.

(*f*) The conversion of medical certificates, and/or reliance on medical examinations conducted in the other State, may also be addressed in the government-to-government agreement between the States.

Procedures for Validation of AME Licences by Reliance upon the Licensing System of Another Contracting State.

IS 2.2.4.9.—(*a*) The Authority should, before making the agreement mentioned in 2.2.4.9 (*a*)(3) be convinced, that the other Contracting State issues licences in conformity with at least this Part 2 by conducting a regulatory comparison of the licensing systems and requirements.

(*b*) An inspector, legal counsel and/or licensing subject matter experts from Nigeria, or from another Contracting State delegated by the Authority of Nigeria, must visit the other Contracting State to be convinced that the licensing system in the other Contracting State is in conformity with at least this Part 2. A report describing the bases for the decision shall be made to the Authority. The report, and the regulatory comparison noted in item (*b*) shall serve the basis for a government-to-government agreement between the involved States regarding use or reliance of the licensing system.

(*c*) An Air Law test must be arranged if the Air Law system of Nigeria is different from the Air Law system from the other Contracting State. The knowledge test may also include Nigeria airworthiness requirements governing certification and continuing airworthiness, and approved maintenance organisations and procedures if those regulations are different from the Contracting State.

(*d*) Application for the validation certificate shall be done by submitting to the Authority a properly filled out form, which form can be obtained from the Authority.

IS 2.2.4.10.—(*a*) The Authority that issues a converted licence based on a licence from another Contracting State remains responsible for the converted licence.

Procedures for Conversion of AME Licences by Reliance upon the Licensing System of Another Contracting State.

(*b*) The Authority should, before making the agreement mentioned in 2.2.4.10 (*a*)(3) be convinced, that the other Contracting State issues licences in conformity with at least this Part 2 by conducting a regulatory comparison of the licensing systems and requirements.

(*c*) An inspector, legal counsel and/or licensing subject matter experts from the Authority or from another Contracting State delegated by the Authority, must visit the other Contracting State to be convinced that the licensing system in the other Contracting State is in conformity with at least this Part 2. A report describing the bases for the decision shall be made to the Authority. The report, and the regulatory comparison noted in item (*b*) shall serve the basis for a government-to-government agreement between the involved States regarding use or reliance of the licensing system.

(1) An Air Law test must be arranged if the Air Law system of Nigeria is different from the Air Law system from the other Contracting State. The knowledge test may also include Nigeria airworthiness requirements governing certification and continuing airworthiness, and approved maintenance organisations and procedures if those regulations are different from the Contracting State.

(*d*) Renewal and re-issue of converted licences and ratings :

(2) when examiners are available in Nigeria to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the licence or rating(s), these tests/checks will be performed by the authorised examiners of the Authority ;

(3) when examiners are not available in Nigeria to perform proficiency checks for the renewal of the rating(s) or skill test for the re-issue of the licence or rating(s), the availability of examiners for these tests/checks from the other Contracting State can be arranged in the agreement mentioned in 2.2.4.4 (*a*)(3).

(*e*) Application for the conversion of a licence from another Contracting State shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.

Specifications and Format of the Licence.

IS 2.2.8.—(*a*) The following details shall appear on the licence and the numbering scheme shall be in Roman numerals.

(1) Name of Nigeria (in bold type) ;

(2) Title of licence (in very bold type)

(3) Serial number of the licence, in Arabic numerals, given by the authority issuing the licence ;

(4) Name of holder in full ;

(5) Date of birth ;

(6) Address of holder ;

(7) Nationality of holder ;

(8) Signature of holder ;

(9) Authority and, where necessary, conditions under which the licence is issued ;

(10) Certification concerning validity and authorisation for holder to exercise privileges appropriate to the licence ;

(11) Signature of officer issuing the licence and the date of such issue ;

(12) Seal or stamp of authority issuing the licence ;

(13) Ratings, (e.g. Category, class, type of aircraft, airframe, aerodrome control, etc.) ;

(14) Remarks, (i.e. special endorsements relating to limitations and endorsements for privileges, including from 5 March 2008 an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention) ;

(15) Any other details desired by the State issuing the licence.

(*b*) The privileges and ratings shall be clearly identified on the licence in items (*a*) (*IX*) and (*XII*).

Note : Item (VI) Nationality is presumed to be citizenship of the licence holder.

IS 2.3.1.7.—(*a*) The details in the records of flights flown as pilot shall contain the items in (*b*) and (*c*) below.

Recording of Flight Time.

(*b*) For the purpose of meeting the requirements of 2.3.1.6, each person shall enter the following information for each flight or lesson logged.

(1) Personal details :

(*iv*) Name of the holder.

(*v*) Address of the holder.

(2) For each flight :

(*vi*) Name of PIC.

(*vii*) Date of flight.

(*viii*) Place and time of departure and arrival.

(*ix*) Type of aircraft and registration.

(3) For each session in a flight simulation training device :

(*i*) Type and qualification number of flight simulation training device.

(*ii*) Flight simulation training device instruction.

(*iii*) Date.

(*iv*) Total time of session.

(4) Pilot function :

(*i*) Solo.

(*ii*) PIC.

(*iii*) Co-pilot.

(*iv*) Dual.

(*v*) Flight instructor.

(*c*) Logging of flight time.

(1) Logging of solo flight time :

(*i*) A student pilot may log as solo flight time only that flight time when the pilot is the sole occupant of the aircraft.

(2) Logging of PIC flight time :

(*i*) The applicant or the holder of a pilot licence may log as PIC time all that flight time during which that person is :

(*a*) The sole manipulator of the controls of an aircraft for which the pilot is rated ; and (*b*) Acting as PIC of an aircraft on which more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted.

(*ii*) An authorised instructor may log as PIC time all of the flight time while acting as an authorised instructor.

(*iii*) A student pilot may log as PIC time all solo flight time and flight time as student pilot-in-command provided that such time is countersigned by the instructor.

(3) Logging of co-pilot time :

(*i*) A person may log co-pilot time only when occupying a pilot seat as co-pilot in an aircraft on which more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted.

(4) Logging of instrument flight time :

(*i*) A person may log instrument flight time only for that flight when the person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.

(5) Logging instruction time :

(*i*) A person may log instruction time when that person receives training from an authorised instructor in an aircraft or flight simulation training device.

(*ii*) The instruction time shall be logged in a record (e.g. logbook) and shall be endorsed by the authorised instructor.

Category II and III Authorisation.

IS 2.3.2.5.—(*a*) The Authority will issue a Category II or Category III pilot authorisation by letter, as a part of an applicant's instrument rating or airline transport pilot certificate.

(*b*) Upon original issue the authorisation will contain the following limitations—

(1) For Category II operations, 1,600 feet RVR and a 150-foot decision height ; and

(2) For Category III operations, as specified in the authorisation document.

(*c*) To remove the limitations on a Category II or Category III pilot authorisation—

(1) A Category II limitation holder may remove the limitation by showing that, since the beginning of the sixth preceding month, the holder has made three Category II ILS approaches with a 150-foot decision height to a landing under actual or simulated instrument conditions ; or

(2) A Category III limitation holder may remove the limitation by showing experience as specified in the authorisation.

(*d*) An authorisation holder or an applicant for an authorisation may use a flight simulator or flight training device if it is approved by the Authority for such use, to meet the experience requirement of paragraph (*e*) of this subsection, or for the practical test required by Part 2 for a Category II or a Category III pilot authorisation, as applicable.

(*e*) Category II : skill test requirements.

(1) An applicant for the following authorisations shall pass a skill test :

(*i*) Issuance or renewal of a Category II pilot authorisation.

(*ii*) The addition of another type aircraft to a Category II pilot authorisation.

(2) To be eligible for the skill test for an authorisation under this subsection, an applicant shall—

(*i*) Meet the requirements of 2.3.2.5 ; and

(*ii*) If the applicant has not passed a skill test for this authorisation during the 12 calendar months preceding the month of the test—

(*iii*) Meet the requirements of 8.4.1.10 ; and

(*iv*) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(3) An applicant shall accomplish the approaches specified in paragraph (*e*)(2)(*ii*)(*B*) of this subsection—

(*i*) Under actual or simulated instrument flight conditions ;

(*ii*) To the minimum decision height for the ILS approach in the type aircraft in which the practical test is to be conducted, except that the approaches need not be conducted to the decision height authorised for Category II operations ;

(*iii*) To the decision height authorised for Category II operations only if conducted in an approved flight simulator or an approved flight training device ; and

(*iv*) In an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved flight simulator that—

(*A*) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought ; and (*b*) Is used in accordance with an approved course conducted by an ATO certified under Part 3.

(4) The flight time acquired in meeting the requirements of paragraph (*e*)(2)(*ii*)(*B*) of this subsection may be used to meet the requirements of paragraph (*e*)(2)(*ii*)(*A*) of this subsection.

(*f*) *Category II* : Skill Test procedures. The skill test consists of an oral increment and a flight increment.

(1) Oral increment. In the oral increment of the practical test an applicant shall demonstrate knowledge of the following—

(*i*) Required landing distance ;

(*ii*) Recognition of the decision height ;

(*iii*) Missed approach procedures and techniques using computed or fixed attitude guidance displays ;

(*iv*) Use and limitations of RVR ;

(*v*) Use of visual clues, their availability or limitations, and altitude at which they are normally discernible at reduced RVR readings ;

(*vi*) Procedures and techniques related to transition from nonvisual to visual flight during a final approach under reduced RVR ;

(*vii*) Effects of vertical and horizontal windshear ;

(*viii*) Characteristics and limitations of the ILS and runway lighting system ;

(*ix*) Characteristics and limitations of the flight director system, auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other required Category II equipment ;

(*x*) Assigned duties of the SIC during Category II approaches, unless the aircraft for which authorisation is sought does not require an SIC ; and

(*xi*) Instrument and equipment failure warning systems.

(2) Flight increment. The following requirements apply to the flight increment of the practical test—

(*i*) The flight increment shall be conducted in an aircraft of the same category, class, and type, as applicable, as the aircraft in which the authorisation is sought or in an approved flight simulator that—

(*A*) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought ; and

(*B*) Is used in accordance with an approved course conducted by an ATO certified under Part 3.

(*ii*) The flight increment shall consist of at least two ILS approaches to 100 feet AGL including at least one landing and one missed approach.

(*iii*) All approaches performed during the flight increment shall be made with the use of an approved flight control guidance system, except if an approved auto approach coupler is installed, at least one approach shall be hand flown using flight director commands.

(*iv*) If a multiengine aeroplane with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the flight increment shall include the performance of one missed approach with an engine, which shall be the most critical engine, if applicable, set at idle or zero thrust before reaching the middle marker.

(*v*) If an approved multiengine flight simulator or approved multiengine flight training device is used for the practical test, the applicant shall execute a missed approach with the most critical engine, if applicable, failed.

(*vi*) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a SIC who holds a type rating in the aircraft in which the authorisation is sought.

(*vii*) An inspector or evaluator may conduct oral questioning at any time during a practical test.

(*g*) Category III : skill test requirements.

(1) The Authority will require that an applicant pass a skill test for—

(*i*) Issuance or renewal of a Category III pilot authorisation.

(*ii*) The addition of another type of aircraft to a Category III pilot authorisation.

(2) To be eligible for the skill test an applicant shall—

(*i*) Meet the requirements of 2.2.1.6 ; and

(*ii*) If the applicant has not passed a practical test for this authorisation during the 12 calendar months preceding the month of the test—

(*A*) Meet the requirements of 8.4.1.10 and 8.10.1.20, 8.10.1.32. ; and

(*B*) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(3) An applicant shall conduct the approaches specified in paragraph (2)(*ii*)(*B*) of this subsection—

(*i*) Under actual or simulated instrument flight conditions ;

(*ii*) To the alert height or decision height for the ILS approach in the type aircraft in which the practical test is to be conducted ;

(*iii*) Not necessarily to the decision height authorised for Category III operations ;

(*iv*) To the alert height or decision height, as applicable, authorised for Category III operations only if conducted in an approved flight simulator or approved flight training device ; and

(*v*) In an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved flight simulator that—

(*A*) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought ; and

(*B*) Is used in accordance with an approved course conducted by an ATO certified under Part 3, Subpart 3.3.

(4) *Knowledge requirements* : An applicant shall demonstrate knowledge of the following :

(*i*) Required landing distance.

(*ii*) Determination and recognition of the alert height or decision height, as applicable, including use of a radar altimeter.

(*iii*) Recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or decision height, as applicable.

(*iv*) Missed approach procedures and techniques using computed or fixed attitude guidance displays and expected height loss as they relate to manual go around or automatic go around, and initiation altitude, as applicable.

(*v*) Use and limitations of RVR, including determination of controlling RVR and required transmissometers.

(*vi*) Use, availability, or limitations of visual cues and the altitude at which they are normally discernible at reduced RVR readings including—

(*A*) Unexpected deterioration of conditions to less than minimum RVR during approach, flare, and rollout ;

(*B*) Demonstration of expected visual references with weather at minimum conditions ;

(*C*) The expected sequence of visual cues during an approach in which visibility is at or above landing minima ; and

(*D*) Procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced RVR.

(*vii*) Effects of vertical and horizontal windshear.

(*viii*) Characteristics and limitations of the ILS and runway lighting system.

(*ix*) Characteristics and limitations of the flight director system auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other Category III equipment.

(*x*) Assigned duties of the SIC during Category III operations, unless the aircraft for which authorisation is sought does not require a SIC.

(*xi*) Recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare, and, if applicable, rollout.

(*xii*) Recognition of, and reaction to, airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.

(5) Flight skill requirements—

(*i*) An applicant may conduct the practical test in an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought, or in an approved flight simulator that—

(*A*) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought ; and

(*B*) Is used in accordance with an approved course conducted by an ATO certified under Part 3.

(*ii*) The practical test shall consist of at least two ILS approaches to 100 feet AGL, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the go around manoeuvre ;

(*iii*) The applicant shall perform all approaches during the practical test with the approved automatic landing system or an equivalent landing system approved by the Authority ;

(*iv*) If a multiengine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the practical test shall include the performance of one missed approach with the most critical engine, if applicable, set at idle or zero thrust before reaching the middle or outer marker ;

(*v*) If an approved multiengine flight simulator or approved multiengine flight training device is used, the applicant shall execute a missed approach with an engine, which shall be the most critical engine, if applicable, failed ;

(*vi*) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a SIC who holds a type rating in the aircraft in which the authorisation is sought ; and (*vii*) Subject to the limitations of this paragraph, for Category IIIb operations predicated on the use of a fail passive rollout control system, the applicant shall execute at least one manual rollout using visual reference or a combination of visual and instrument references. The applicant shall initiate this manoeuvre by a fail passive disconnect of the rollout control system—

(*A*) After main gear touchdown ;

(*B*) Prior to nose gear touchdown ;

(*C*) In conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway ; and

(*D*) In weather conditions anticipated in Category IIIb operations

(6) An inspector or evaluator may conduct oral questioning at any time during the practical test.

Student Pilots.

IS 2.3.3.—(*a*) A student pilot who is receiving training for solo flight shall receive and log flight training for the following manoeuvres and procedures, as applicable for each category and class rating as specified in the applicable subsection to this IS.

Note : When (SE) is indicated, the item is only for single engine aircraft. When (ME) is indicated, the item is only for multi-engine aircraft.

IS 2.3.3.2. *Student Pilots* : Manoeuvres and Procedures for Pre-Solo Flight Training—Aeroplane Category.

(*a*) A student pilot who is receiving training for solo flight in an aeroplane shall receive and log flight training for the following manoeuvres and procedures :

(1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.

(2) Taxiing, or surface operations, including runups.

(3) Takeoffs and landings, including normal and crosswind.

(4) Straight and level flight and turns in both directions.

(5) Climbs and climbing turns.

(6) Aerodrome traffic patterns including entry and departure procedures.

(7) Collision avoidance, windshear avoidance and wake turbulence avoidance.

(8) Descents, with and without turns, using high and low drag configurations.

(9) Flight at various airspeeds from cruise to slow flight.

(10) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall and recovery from a full stall.

(11) Emergency procedures and equipment malfunctions.

(12) Ground reference manoeuvres.

(13) Approaches to a landing area with simulated engine malfunctions.

(14) Slips to a landing (SE only).

(15) Go-arounds.

IS 2.3.3.3. *Student Pilots* : Manoeuvres and Procedures for Pre-Solo Flight Training—Helicopter Category.

(*a*) A student pilot who is receiving training for solo flight in a helicopter shall receive and log flight training for the following manoeuvres and procedures :

(1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.

(2) Taxiing, or surface operations, including runups.

(3) Takeoffs and landings, including normal and crosswind.

(4) Straight and level flight and turns in both directions.

(5) Climbs and climbing turns.

(6) Aerodrome traffic patterns including entry and departure procedures.

(7) Collision avoidance, windshear avoidance and wake turbulence avoidance.

(8) Descents, with and without turns, using high and low drag configurations.

(9) Flight at various airspeeds.

(10) Emergency procedures and equipment malfunctions.

(11) Ground reference manoeuvres.

(12) Approaches to the landing area.

(13) Hovering and hovering turns.

(14) Go-arounds.

(15) Simulated emergency procedures, including autorotational descents with a power recovery and power recovery to hover.

(16) Rapid decelarations.

(17) Simulated one-engine-inoperative approaches and landings for multi-engine helicopters (ME).

IS 2.3.3.4. *Student Pilots* : Manoeuvres and Procedures for Pre-Solo Flight Training—Powered-Lift Category.

(*a*) A student pilot who is receiving training for solo flight in a powered-lift shall receive and log flight training for the following manoeuvres and procedures :

(1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.

(2) Taxiing, or surface operations, including runups.

(3) Takeoffs and landings, including normal and crosswind.

(4) Straight and level flight and turns in both directions.

(5) Climbs and climbing turns.

(6) Aerodrome traffic patterns including entry and departure procedures.

(7) Collision avoidance, windshear avoidance and wake turbulence avoidance.

(8) Descents, with and without turn.

(9) Flight at various airspeeds from cruise to slow flight.

(10) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall, and recovery from a full stall.

(11) Emergency procedures and equipment malfunctions.

(12) Ground reference manoeuvres.

(13) Approaches to a landing area with simulated engine failure.

(14) Go-arounds.

(15) Approaches to the landing area.

(16) Hovering and hovering turns.

(17) Simulated one-engine-inoperative approaches and landings for multi-engine powered-lift (ME).

IS 2.3.3.5. *Student Pilots* : Manoeuvres and Procedures for Pre-Solo Flight Training—Airship Category

(*a*) A student pilot who is receiving training for solo flight in an airship shall receive and log flight training for the following manoeuvres and procedures :

(1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.

(2) Taxiing, or surface operations, including runups.

(3) Takeoffs and landings, including normal and crosswind.

(4) Straight and level flight and turns in both directions.

(5) Climbs and climbing turns.

(6) Aerodrome traffic patterns including entry and departure procedures.

(7) Collision avoidance, windshear avoidance and wake turbulence avoidance.

(8) Descents, with and without turn.

(9) Flight at various airspeeds from cruise to slow flight.

(10) Emergency procedures and equipment malfunctions.

(11) Ground reference manoeuvres.

(12) Rigging, ballasting, and controlling pressure in the ballonets, and superheating.

(13) Landings with positive and with negative static trim.

IS 2.3.3.6. *Student Pilots* : Manoeuvres and Procedures for Pre-Solo Flight Training—Balloon Category

(*a*) A student pilot who is receiving training for solo flight in a balloon shall receive and log flight training for the following manoeuvres and procedures :

(1) Layout and assembly procedures ;

(2) Proper flight preparation procedures, including preflight planning and preparation, and aircraft systems ;

(3) Ascents and descents ;

(4) Landing and recovery procedures ;

(5) Emergency procedures and equipment malfunctions ;

(6) Operation of hot air or gas source, ballast, valves, vents, and rip panels as appropriate ;

(7) Use of deflation valves or rip panels for simulating an emergency ;

(8) The effects of wind on climb and approach angles ; and

(9) Obstruction detection and avoidance techniques.

IS 2.3.3.7. *Student Pilots* : Manoeuvres and Procedures for Pre-Solo Flight Training—Glider Category.

(*a*) A student pilot who is receiving training for solo flight in a glider shall receive and log flight training for the following manoeuvres and procedures :

(1) Proper flight preparation procedures, including preflight planning and preparation, aircraft systems, and is applicable, powerplant operations ;

(2) Taxiing or surface operations, including runups, if applicable ;

(3) Launches, including normal and crosswind ;

(4) Straight and level flight, and turns in both directions, if applicable ;

(5) Aerodrome traffic patterns, including entry procedures ;

(6) Collision avoidance, windshear avoidance, and wake turbulence avoidance ;

(7) Descents with and without turns using high and low drag configurations ;

(8) Flight at various airspeeds ;

(9) Emergency procedures and equipment malfunctions ;

(10) Ground reference manoeuvres ;

(11) Inspection of towline rigging and review of signals and release procedures, if applicable ;

(12) Aerotow, ground tow, or self-launch procedures ;

(13) Procedures for disassembly and assembly of the glider ;

(14) Stall entry, stall, and stall recovery ;

(15) Straight glides, turns, and spirals ;

(16) Landings, including normal and crosswind ;

(17) Slips to a landing ;

(18) Procedures and techniques for thermalling ; and

(19) Emergency operations, including towline break procedures.

IS 2.3.4. Private Pilot Licence.

IS 2.3.4.2.—(*a*) The skill test for the single-engine and multi-engine private pilot licence -aeroplane shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

PPL Skill Test—Aeroplane Category.

Note 1 : When (SE) is indicated, the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraph is only for multi-engine. When nothing is indicated, the item or paragraph is for single-engine and multi-engine.

Note 2 : When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated, the item is for land and seaplanes.

(1) Preflight preparation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Airworthiness requirements.

(*iii*) Weather information.

(*iv*) Cross-country flight planning.

(*v*) National airspace system.

(*vi*) Performance and limitations.

(*vii*) Operation of system.

(*viii*) Principles of flight.

(*ix*) Water and Seaplane Characteristics (S).

(*x*) Seaplane bases, maritime rules and aids to marine navigation (S).

(*xi*) Aeromedical factors.

(2) Preflight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine Starting.

(*iv*) Taxiing (L).

(*v*)Taxiing and Sailing (S).

(*vi*) Before takeoff check.

(3) Aerodrome and seaplane operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Aerodrome/Seaplane Base, runway and taxiway signs, markings and lighting.

(4) Takeoffs, landings and go-arounds ; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind takeoff and climb.

(*ii*) Normal and crosswind approach and landing.

(*iii*) Soft-field takeoff and climb (SE) (L).

(*iv*) Soft-field approach and landing (SE) (L).

(*v*) Short-field (Confined area (S)) takeoff and maximum performance climb.

(*vi*) Short-field approach (Confined area (S)) and landing.

(*vii*) Glassy Water takeoff and climb (S).

(*viii*) Glassy water approach and landing (S).

(*ix*) Rough water takeoff and climb (S).

(*x*) Rough water approach and landing (S).

(*xi*) Forward slip to a landing (SE).

(*xii*) Go-around /rejected landing.

(5) Performance manoeuvre ; including the applicant's knowledge and performance of the following tasks—

(*i*) Steep turns.

(6) Ground reference manoeuvres ; including the applicant's knowledge and performance of the following tasks—

(*i*) Rectangular course.

(*ii*) S-turns.

(*iii*) Turns around a point.

(7) Navigation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Pilotage and dead reckoning.

(*ii*) Navigation systems and radar services.

(*iii*) Diversion.

(*iv*) Lost procedures.

(8) Slow flight and stalls ; including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring during slow flight ;

(*ii*) Power-off stalls ;

(*iii*) Power-on stalls ;

(*iv*) Spin awareness.

(9) Basic instrument manoeuvres; including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*) Constant airspeed climbs.

(*iii*) Constant airspeed descents.

(*iv*) Turns to headings.

(*v*) Recovery from unusual flight.

(*vi*) Radio Communications, navigation systems/facilities and radar services ; including the applicant's knowledge and performance of the following tasks—

(10) Emergency operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Emergency approach and landing.

(*ii*) Emergency descent (ME).

(*iii*) Engine failure during takeoff before minimum controllable airspeed (VMC) (simulated) (ME).

(*iv*) Engine failure after lift-off (simulated) (ME).

(*v*) Approach and landing with an inoperative engine (simulated) (ME).

(*vi*) Systems and equipment malfunctions.

(*vii*) Emergency equipment and survival gear.

(11) Multi-engine operations (ME) ; including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring with one engine inoperative.

(*ii*) VMC demonstration.

(*iii*) Engine failure during flight (by reference to instruments).

(*iv*) Instrument approach—one engine inoperative (by reference to instruments).

(12) Night operation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Night preparation.

(13) Post-flight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) After landing, parking and securing.

(*ii*) Anchoring (S).

(*iii*) Docking and mooring (S).

(*iv*) Ramping/Beaching (S).

IS 2.3.4.3. PPL Skill Test—Helicopter Category.

(*a*) The skill test for the private pilot licence - helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

(1) Preflight preparation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Cross-country flight planning.

(*iv*) National airspace system.

(*v*) Performance and limitations.

(*vi*) Operation of system.

(*vii*) Minimum equipment list.

(*viii*) Aeromedical factors.

(2) Preflight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine Starting and rotor engagement.

(*iv*) Before takeoff check.

(3) Aerodrome and heliport operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Aerodrome and heliport markings and lighting.

(4) Hovering manoeuvres; including the applicant's knowledge and performance of the following tasks—

(*i*) Vertical takeoff and landing.

(*ii*) Slope operations.

(*iii*) Surface taxi.

(*iv*) Hover taxi.

(*v*) Air taxi.

(5) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

(6) Normal and crosswind takeoff and climb.

(7) Normal and crosswind approach.

(8) Maximum performance takeoff and climb.

(*i*) Steep approach.

(*ii*) Rolling takeoff.

(*iii*) Shallow approach and running/roll-on landing.

(*iv*) Go-around.

(9) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks—

(*i*) Rapid deceleration.

(*ii*) Straight in autorotation.

(10) Navigation; including the applicant's knowledge and performance of the following tasks—

(*i*) Pilotage and dead reckoning.

(*ii*) Radio navigation and radar services.

(*iii*) Diversion.

(*iv*) Lost procedures.

(11) Emergency operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Power failure at a hover.

(*ii*) Power failure at altitude.

(*iii*) Systems and equipment malfunctions.

(*iv*) Settling-with-power.

(*v*) Low rotor RPM recovery.

(*vi*) Dynamic rollover.

(*vii*) Ground resonance.

(*viii*) Low G conditions.

(*ix*) Emergency equipment and survival gear.

(12) Night operation; including the applicant's knowledge and performance of the following tasks—

(*i*) Physiological aspects of night flying.

(*ii*) Lighting and equipment for night flying.

(13) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) After landing and securing.

IS 2.3.4.4. PPL Skill Test—Powered-Lift Category.

(*a*) Reserved.

IS 2.3.4.5. PPL Skill Test—Airship Category

(*a*) The skill test for the private pilot licence- airship category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

(1) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Certificates and documents.

(*ii*) Weather information.

(*iii*) Cross-country flight planning.

(*iv*) National airspace system.

(*v*) Performance and limitations

(*vi*) Operation of systems.

(*vii*) Aeromedical factors.

(2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine starting.

(*iv*) Unmasting and positioning for takeoff.

(*v*) Ground handling.

(*vi*) Before takeoff check.

(3) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Airport and runway markings and lighting.

(4) Takeoffs, landings and go-arounds, including the applicant's knowledge and performance of the following tasks :

(*i*) Ground weigh-off.

(*ii*) Up-ship takeoff.

(*iii*) Wheel takeoff.

(*iv*) Approach and landing.

(*v*) Go-around.

(5) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*) Ascents and descents.

(*iii*) Level turns.

(*iv*) In-flight weigh-off.

(*v*) Manual pressure control.

(*vi*) Static and dynamic trim.

(6) Ground reference manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Rectangular course.

(*ii*) Turns around a point.

(7) Navigation, including the applicant's knowledge and performance of the following tasks—

(8) Pilotage and dead reckoning.

(*i*) Navigation systems and radar services.

(*ii*) Diversion.

(*iii*) Lost procedures.

(9) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Engine fire during flight.

(*ii*) Envelope emergencies.

(*iii*) Free ballooning.

(*iv*) Ditching and emergency landing.

(*v*) Systems and equipment malfunctions.

(10) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Masting.

(*ii*) Post-masting.

IS 2.3.4.6. PPL Skill Test—Balloon Category.

(*a*) The skill test for the private pilot licence – balloon category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

(1) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Certificates and documents.

(*ii*) Weather information.

(*iii*) Flight planning.

(*iv*) National airspace system.

(*v*) Performance and limitations.

(*vi*) Operation of systems.

(*vii*) Aeromedical factors.

(2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Launch site selection.

(*ii*) Crew briefing and preparation.

(*iii*) Layout and assembly.

(*iv*) Preflight inspection.

(*v*) Inflation.

(*vi*) Basket/gondola management.

(*vii*) Pre-launch check.

(3) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(4) Launches and landing, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal launch.

(*ii*) Launch over obstacle.

(*iii*) Approach to landing.

(*iv*) Normal landing.

(*v*) High-wind landing.

(5) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Ascents.

(*ii*) Altitude control (level flight).

(*iii*) Descents, to include recognition of, and recovery from, rapid descents

(*iv*) Contour flying.

(*v*) Obstacle clearance.

(*vi*) Tethering.

(*vii*) Winter flying.

(*viii*) Collision and avoidance pre-cautions

(*ix*) Mountain flying.

(6) Navigation, including the applicant's knowledge and performance of the following tasks—

(*i*) Navigation, to include cross country flying and dead reckoning, etc.

(7) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Systems and equipment malfunctions.

(*ii*) Emergency equipment and survival gear.

(*iii*) Water landing.

(*iv*) Thermal flight.

(8) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Recovery.

(*ii*) Deflation and packing.

(*iii*) Refuelling.

IS 2.3.4.7. PPL Skill Test—Glider Category.

(*a*) The skill test for the private pilot licence—glider category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

(1) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Operation of systems.

(*iv*) Performance and limitations.

(*v*) Aeromedical factors.

(2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Assembly.

(*ii*) Ground handling.

(*iii*) Preflight inspection.

(*iv*) Cockpit management.

(*v*) Visual signals.

(3) Aerodrome and gliderport operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.

(*ii*) Traffic patterns.

(*iii*) Aerodrome, runway, and taxiway signs, markings, and lighting.

(4) Launches–aero tow, including the applicant's knowledge and performance of the following tasks :

(*i*) Before takeoff checks.

(*ii*) Normal and crosswind takeoff.

(*iii*) Maintaining tow positions.

(*iv*) Slack line.

(*v*) Boxing the wake.

(*vi*) Tow release.

(*vii*) Abnormal occurrences.

(5) Launches– ground tow, including the applicant's knowledge and performance of the following tasks—

(*i*) Before takeoff check.

(*ii*) Normal and crosswind takeoff.

(*iii*) Abnormal occurrences.

(6) Launches– self-launch, including the applicant's knowledge and performance of the following tasks—

(*i*) Engine starting.

(*ii*) Taxiing.

(*iii*) Before takeoff check.

(*iv*) Normal and crosswind takeoff and climb.

(*v*) Engine shutdown in flight.

(*vi*) Abnormal occurrences.

(7) Landings, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and cross wind landing.

(*ii*) Slips to landing.

(*iii*) Downwind landing.

(8) Performance airspeeds, including the applicant's knowledge and performance of the following tasks—

(*i*) Minimum sink airspeed.

(*ii*) Speed-to-fly.

(9) Soaring techniques, including the applicant's knowledge and performance of the following tasks—

(*i*) Thermal soaring.

(*ii*) Ridge and slope soaring.

(*iii*) Wave soaring.

(10) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Straight glides.

(*ii*) Turns to headings.

(*iii*) Steep turns.

(11) Navigation, including the applicant's knowledge and performance of the following tasks—

(*i*) Flight preparation and planning.

(*ii*) National airspace system.

(12) Slow flight and stalls, including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring at minimum control airspeed.

(*ii*) Stall recognition and recovery.

(13) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Simulated off-airport landing.

(*ii*) Emergency equipment and survival gear.

(14) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) After-landing and securing.

IS 2.3.5.2. CPL Skill Test—Aeroplane Category.

(*a*) The skill test for the single-engine and multi-engine commercial pilot licence - aeroplane shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

Note 1 : When (SE) is indicated, the item or paragraph is only for single-engine ; when (ME) is indicated, the item or paragraph is only for multi-engine. When nothing is indicated, the item or paragraph is for single-engine and multi-engine.

Note 2 : When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated, the item is for land and seaplanes.

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Airworthiness requirements.

(*iii*) Weather information.

(*iv*) Cross-country flight planning.

(*v*) National airspace system.

(*vi*) Performance and limitations.

(*vii*) Operation of system.

(*viii*) Principles of flight (ME).

(*ix*) Water and Seaplane characteristics (S).

(*x*) Seaplane bases, maritime rules and aids to marine navigation (S).

(*xi*) Aeromedical factors.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine Starting.

(*iv*) Taxiing (L).

(*v*) Taxiing and sailing (S).

(*vi*) Before takeoff check.

(3) Aerodrome and seaplane base operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Aerodrome/Seaplane base, runway and taxiway signs, markings and lighting.

(4) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind takeoff and climb.

(*ii*) Normal and crosswind approach and landing.

(*iii*) Soft-field takeoff and climb (SE).

(*iv*) Soft-field approach and landing (SE).

(*v*) Short-field (Confined area (S)) takeoff and maximum performance climb.

(*vi*) Short-field (Confined area (S)) approach and landing.

(*vii*) Glassy water takeoff and climb (S).

(*viii*) Glassy water approach and landing (S).

(*ix*) Rough water takeoff and climb (S).

(*x*) Rough water approach and landing (S).

(*xi*) Power-off 180 degrees accuracy approach and landing (SE).

(*xii*) Go-around /rejected landing.

(5) Performance manoeuvres; including the applicant's knowledge and performance of the following tasks—

(*i*) Steep turns.

(*ii*) Steep spiral (SE).

(*iii*) Chandelles (SE).

(*iv*) Lazy eights (SE).

(6) Ground reference manoeuvres; including the applicant's knowledge and performance of the following tasks—

(*i*) Eights on pylons (SE).

(7) Navigation; including the applicant's knowledge and performance of the following tasks—

(*i*) Pilotage and dead reckoning.

(*ii*) Navigation systems and radar services.

(*iii*) Diversion.

(*iv*) Lost procedures

(8) Slow flight and stalls; including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring during slow flight.

(*ii*) Power-off stalls.

(*iii*) Power-on stalls.

(*iv*) Spin awareness.

(9) Emergency operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Emergency approach and landing.

(*ii*) Emergency descent (ME).

(*iii*) Engine failure during takeoff before VMC (simulated) (ME).

(*iv*) Engine failure after lift-off (simulated) (ME).

(*v*) Approach and landing with an inoperative engine (simulated) (ME).

(*vi*) Systems and equipment malfunctions.

(*vii*) Emergency equipment and survival gear.

(10) High altitude operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Supplemental oxygen.

(*ii*) Pressurisation.

(11) Multi-engine operations (ME) ; including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring with one engine inoperative.

(*ii*) VMC demonstration.

(*iii*) Engine failure during flight (by reference to instruments.

(*iv*) Instrument approach – one engine inoperative (by reference to instruments).

(12) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) After landing, parking and securing.

(*ii*) Anchoring (S).

(*iii*) Docking and mooring (S).

(*iv*) Ramping/beaching (S).

IS 2.3.5.3.—(*a*) The skill test for the commercial pilot licence - helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks : CPL Skill Test—Helicopter Category.

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Cross-country flight planning.

(*iv*) National airspace system.

(*v*) Performance and limitations.

(*vi*) Operation of system.

(*vii*) Minimum equipment list.

(*viii*) Aeromedical factors.

(*ix*) Physiological aspects of night flying.

(*x*) Lighting and equipment for night flying.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine Starting and rotor engagement.

(*iv*) Before takeoff check.

(3) Aerodrome and heliport operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Aerodrome and heliport markings and lighting.

(4) Hovering manoeuvres; including the applicant's knowledge and performance of the following tasks—

(*i*) Vertical takeoff and landing.

(*ii*) Slope operations.

(*iii*) Surface taxi.

(*iv*) Hover taxi.

(*v*) Air taxi.

(5) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind takeoff and climb.

(*ii*) Normal and crosswind approach and landing.

(*iii*) Maximum performance takeoff and climb.

(*iv*) Steep approach.

(*v*) Rolling takeoff.

(*vi*) Shallow approach and running/roll-on landing.

(*vii*) Go-around.

(6) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks—

(*i*) Rapid deceleration.

(*ii*) 180 Degrees autorotation.

(7) Navigation; including the applicant's knowledge and performance of the following tasks—

(*i*) Pilotage and dead reckoning.

(*ii*) Radio navigation and radar services.

(*iii*) Diversion.

(*iv*) Lost procedures.

(8) Emergency operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Power failure at a hover.

(*ii*) Power failure at altitude.

(*iii*) Systems and equipment malfunctions.

(*iv*) Settling-with-power.

(*v*) Low rotor RPM recovery.

(*vi*) Dynamic rollover.

(*vii*) Ground resonance.

(*viii*) Low G conditions.

(*ix*) Emergency equipment and survival gear.

(9) Special operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Confined area operation.

(*ii*) Pinnacle/platform operations.

(10) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) After landing, parking and securing.

IS 2.3.5.4.—(*a*) Reserved. CPL Skill Test—Powered-Lift Category.

IS 2.3.5.5.—(*a*) The skill test for the commercial pilot licence – airship shall include at least the following areas of operation with CRM competencies applied and evident in all tasks : CPL Skill Test—Airship Category.

(1) Technical subjects, including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual scanning and collision avoidance.

(*iii*) Use of distractions during flight training.

(*iv*) Principles of flight.

(*v*) Airship weight-off, ballast, and trim.

(*vi*) Night operations.

(*vii*) Regulations and publications.

(*viii*) National airspace system.

(*ix*) Logbook entries and licence endorsement.

(2) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Cross-country flight planning.

(*iv*) Performance and limitations.

(*v*) Operations of systems.

(3) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvre lesson.

(4) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine starting.

(*iv*) Unmasting and positioning for take-off.

(*v*) Ground handling.

(*vi*) Before tak-eoff check.

(5) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.

(*ii*) Traffic pattern operations.

(*iii*) Aerodrome, runway, and taxiway markings and lighting.

(6) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Flight to, from, and at pressure height.

(*ii*) In-flight weigh-off.

(*iii*) Manual pressure control.

(*iv*) Static and dynamic trim.

(7) Navigation, including the applicant's knowledge and performance of the following tasks—

(*i*) Pilotage and dead reckoning.

(*ii*) Diversion.

(*iii*) Lost procedures.

(*iv*) Navigation systems and air traffic control radar services.

(8) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Aborted take-off.

(*ii*) Engine failure during take-off.

(*iii*) Engine failure during flight.

(*iv*) Engine fire during flight.

(*v*) Envelope emergencies.

(*vi*) Free ballooning.

(*vii*) Ditching and emergency landing.

(*viii*) Systems and equipment malfunctions.

(9) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Masting.

(*ii*) Post-masting.

CPL Skill Test—Balloon Category.

IS 2.3.5.6.—(*a*) The skill test for the commercial pilot licence – balloon shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

Note : When (BH) is indicated, the item is for hot air balloons only. When (BG) is indicated, the item is for gas balloons.

(1) Technical subjects, including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual scanning and collision avoidance.

(*iii*) Principles of flight.

(*iv*) Regulations and publications.

(*v*) National airspace system.

(*vi*) Logbook entries and licence endorsement.

(2) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Flight planning.

(*iv*)Performance and limitations.

(*v*) Operations of systems.

(3) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvre lesson.

(4) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Launch site selection.

(*ii*) Crew briefing and preparation.

(*iii*) Layout and assembly.

(*iv*) Preflight inspection.

(*v*) Inflation.

(*vi*) Basket/gondola management.

(*vii*) Pre-launch check.

(5) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.

(6) Launches and landings, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal launch.

(*ii*) Launch over obstacle.

(*iii*) Approach to landing.

(*iv*) Steep approach to landing.

(*v*) Normal landing.

(*vi*) High-wind landing.

(7) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Ascents.

(*ii*) Altitude control (level flight).

(*iii*) Descents.

(*iv*) Rapid ascent and descent.

(*v*) Contour flying (BH).

(*vi*) High altitude flight. (BG)

(*vii*) Obstacle avoidance (BH).

(*viii*) Tethering (BH).

(*ix*) Winter flying.

(*x*) Mountain flying.

(8) Navigation, including the applicant's knowledge and performance of the following tasks—

(*i*) Navigation.

(9) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Systems and equipment malfunctions.

(*ii*) Emergency equipment and survival gear.

(*iii*) Water landing.

(*iv*) Thermal flight.

(10) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Recovery.

(*ii*) Deflation and pack-up.

(*iii*) Refueling (BH).

IS 2.3.5.7.—(*a*) The skill test for the commercial pilot licence - glider category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks : CPL Skill Test-glider Category.

(1) Preflight preparation, including the applicant's knowledge and perfor mance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Operation of systems.

(*iv*) Performance and limitations.

(*v*) Aeromedical factors.

(2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Assembly.

(*ii*) Ground handling.

(*iii*) Preflight inspection.

(*iv*) Cockpit management.

(*v*) Visual signals.

(3) Aerodrome and gliderport operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.

(*ii*) Traffic patterns.

(*iii*) Aerodrome, runway, and taxiway signs, markings, and lighting.

(4) Launches- aero tow, including the applicant's knowledge and performance of the following tasks—

(*i*) Before take-off checks.

(*ii*) Normal and crosswind take-off.

(*iii*) Maintaining tow positions.

(*iv*) Slack line.

(*v*) Boxing the wake.

(*vi*) Tow release.

(*vii*) Abnormal occurrences.

(5) Launches-ground tow, including the applicant's knowledge and performance of the following tasks—

(*i*) Before take-off check.

(*ii*) Normal and crosswind take-off.

(*iii*) Abnormal occurrences.

(6) Launches- self-launch, including the applicant's knowledge and performance of the following tasks—

(*i*) Engine starting.

(*ii*) Taxiing.

(*iii*) Before take-off check.

(*iv*) Normal and crosswind take-off and climb.

(*v*) Engine shutdown in flight.

(*vi*) Abnormal occurrences.

(7) Landings, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and cross wind landing.

(*ii*) Slips to landing.

(*iii*) Downwind landing.

(8) Performance airspeeds, including the applicant's knowledge and performance of the following tasks—

(*i*) Minimum sink airspeed.

(*ii*) Speed-to-fly.

(9) Soaring techniques, including the applicant's knowledge and performance of the following tasks—

(*i*) Thermal soaring.

(*ii*) Ridge and slope soaring.

(*iii*) Wave soaring.

(10) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Straight glides.

(*ii*) Turns to headings.

(*iii*) Steep turns.

(11) Navigation, including the applicant's knowledge and performance of the following tasks—

(*i*) Flight preparation and planning.

(*ii*) National airspace system.

(12) Slow flight and stalls, including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring at minimum control airspeed.

(*ii*) Stall recognition and recovery.

(13) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Simulated off-aerodrome landing.

(*ii*) Emergency equipment and survival gear.

(14) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) After-landing and securing.

Multi-Crew Pilot Licence Skill Test-Aeroplane Category.

IS 2.3.6.2.—(*a*) The skill test for the multi-crew pilot licence shall determine that the applicant, as pilot flying and pilot not flying, possesses the required skills in the following competency areas to perform as a co-pilot of turbine-powered aeroplanes certificated for operation with at least two pilots under VFR and IFR :

(1) Apply threat and error management principles ;

(2) Perform aeroplane ground operations ;

(3) Perform take-off ;

(4) Perform climb ;

(5) Perform cruise ;

(6) Perform descent ;

(7) Perform approach ;

(8) Perform landing; and perform after-landing and aeroplane post-flight operations.

ATPL and Aircraft Type Rating Skill Test-Aeroplane Category.

IS 2.3.7.3.—(*a*) The skill test for the airline transport pilot licence-aeroplanes shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

(*i*) Equipment examination.

(*ii*) Performance and limitations.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Powerplant start.

(*iii*)Taxiing.

(*iv*) Before takeoff checks.

(3) Takeoffs and departure phase; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal takeoffs with different flap settings, including expedited takeoff.

(*ii*) Instrument takeoff.

(*iii*) Powerplant failure during takeoff.

(*iv*) Rejected takeoff.

(*v*) Departure procedures.

(4) In-flight manoeuvres; including the applicant's knowledge and performance of the following tasks—

(*i*) Steep turns.

(*ii*) Approach to stalls.

(*iii*) Powerplant failure.

(*iv*) Specific flight characteristics.

(*v*) Recovery from unusual altitudes.

(5) Instrument procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Standard terminal arrival/flight management system procedures.

(*ii*) Holding procedures.

(*iii*) Precision instrument approaches.

(*iv*) Non-precision instrument approaches.

(*v*) Circling approach.

(*vi*) Missed approach.

(6) Landings and approaches to landings ; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind approaches and landings.

(*ii*) Landing from a precision approach.

(*iii*) Approach and landing with (simulated) powerplant failure.

(*iv*) Landing from a circling approach.

(*v*) Rejected landing.

(*vi*) Landing from a no-flap or a non-standard flap approach.

(*vii*) Normal and abnormal procedures.

(*viii*) Emergency procedures.

(7) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) After landing procedures.

(*ii*) Parking and securing.

ATPL and Aircraft Type Rating Skill Test-Helicopter Category.

IS 2.3.7.4.—(*a*) The skill test for the airline transport pilot licence for helicopters shall include at least the following areas of operation with CRM competencies applied and evident in all tasks :

(1) Preflight preparations and checks; including the applicant's knowledge and performance of the following tasks—

(*i*) Equipment examination.

(*ii*) Performance and limitations.

(2) Preflight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Powerplant start.

(*iii*) Taxiing.

(*iv*) Pre-takeoff checks.

(3) Takeoff and departure phase ; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind take-off.

(*ii*) Instrument takeoff.

(*iii*) Powerplant failure during take-off.

(*iv*) Rejected takeoff.

(*v*) Instrument departure.

(4) In-flight manoeuvres ; including the applicant's knowledge and performance of the following tasks—

(*i*) Steep turns.

(*ii*) Powerplant failure-multi-engine helicopter.

(*iii*) Powerplant failure-single-engine helicopter.

(*iv*) Recovery from unusual altitudes.

(*v*) Settling with power.

(5) Instrument procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Instrument arrival.

(*ii*) Holding.

(*iii*) Precision instrument approaches.

(*iv*) Non-precision instrument approaches.

(*v*) Missed approach.

(6) Landings and approaches to landings ; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind approaches and landings.

(*ii*) Approach and landing with simulated powerplant failure-multiengine helicopter.

(*iii*) Rejected landing.

(7) Normal and abnormal procedures ; including the applicant's knowledge and performance of the tasks.

(8) Emergency procedures ; including the applicant's knowledge and performance.

(9) Post-flight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) After landing procedures.

(*ii*) Parking and securing.

IS 2.3.7.5.—(*a*) Reserved. ATPL and Aircraft Type Rating Skill Test-Powered-Lift Category.

Instrument Rating Skill Test and Proficiency Check.

(*a*) The skill test and proficiency check for the instrument rating shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft :

Note : When (SE) is indicated, the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated, the item or paragraph is for single-engine and multi-engine.

(1) Preflight preparation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Weather information.

(*ii*) Cross-country flight planning.

(2) Preflight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Aircraft systems related to IFR operations.

(*ii*) Aircraft flight instruments and navigation equipment.

(*iii*) Instrument cockpit check.

(3) Air traffic control clearances and procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Air traffic control clearances.

(*ii*) Compliance with departure, en route and arrival procedures and clearances.

(*iii*) Holding procedures.

(4) Flight by reference to instruments ; including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*) Change of airspeed.

(*iii*) Constant airspeed climbs and descents.

(*iv*) Rate climbs and descents.

(*v*) Timed turns to magnetic compass headings.

(*vi*) Steep turns.

(*vii*) Recovery from unusual flight attitudes.

(5) Navigation systems ; including the applicant's knowledge and performance of the following tasks—

(*i*) Intercepting and tracking navigational systems and DME Arcs.

(*ii*) Instrument approach procedures; including the applicant's knowledge and performance of the following tasks—

(*iii*) Non-precision instrument approach.

(*iv*) Precision ILS instrument approach.

(*v*) Missed approach.

(*vi*) Circling approach.

(*vii*) Landing from a straight-in or circling approach.

(6) Emergency operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Loss of communications.

(*ii*) One engine inoperative during straight-and-level flight and turns (ME).

(*iii*) One engine inoperative - instrument approach (ME).

(*iv*) Loss of gyro attitude and/or heading indicators.

(7) Post-flight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Checking instruments and equipment.

Flight Instructor Skill Test and Proficiency Check.

IS 2.3.9.2. —(*a*) *Aeroplane Category* : The skill test and proficiency check for the flight instructor rating-aeroplane shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category and class of aircraft :

Note 1 : When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated, the item or paragraph is for single-engine and multi-engine.

Note 2 : When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated, the item is for land and seaplanes.

(1) Fundamentals of instruction ; including the applicant's knowledge and performance of the following tasks—

(*ii*) The learning process.

(*iii*) The teaching process.

(*iv*) Teaching methods.

(*v*) Evaluation.

(*vi*) Flight instructor characteristics and responsibilities.

(*vii*) Human factors.

(*viii*) Planning instructional activity.

(2) Technical subject areas ; including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual Scanning and collision avoidance.

(*iii*) Principles of flight.

(*iv*) Aeroplane flight controls.

(*v*) Aeroplane weight and balance.

(*vi*) Navigation and flight planning.

(*vii*) Night operations.

(*viii*) High altitude operations.

(*ix*) Regulations and publications.

(*x*) Use of minimum equipment list.

(*xi*) National airspace system.

(*xii*) Navigation aids and radar services.

(*xiii*) Logbook entries and licence endorsements.

(*xiv*) Water and seaplane characteristics (S).

(*xv*) Seaplane bases, rules and aids to marine navigation (S).

(3) Preflight preparation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Operation of systems (SE).

(*iv*) Performance and limitations (SE).

(*v*) Airworthiness requirements.

(4) Preflight lesson on a manoeuvre to be performed in flight ; including the applicant's knowledge and performance of the following task—

(*i*) Manoeuvre lesson.

(5) Preflight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine starting.

(*iv*) Taxiing (L).

(*v*) Taxiing (S).

(*vi*) Sailing (S).

(*vii*) Before takeoff check.

(6) Aerodrome and seaplane base operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Aerodrome and runway markings and lighting.

(7) Takeoffs, landings and go-arounds ; including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind takeoff and climb.

(*ii*) Short field (Confined area (S) takeoff and maximum performance climb.

(*iii*) Soft field takeoff and climb (SE).

(*iv*) Glossy water takeoff and climb (S).

(*v*) Rough water takeoff and climb (S).

(*vi*) Normal and crosswind approach and landing.

(*vii*) Slip to a landing (SE).

(*viii*) Go-around/rejected landing.

(*ix*) Short field (Confined area (S)) approach and landing.

(*x*) Soft field approach and landing (SEL).

(*xi*) Power-off 180 degrees accuracy approach and landing (SEL).

(*xii*) Glassy water approach and landing (S).

(*xiii*) Rough water approach and landing (S).

(8) Fundamentals of flight ; including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*)Level turns.

(*iii*) Straight climbs and climbing turns.

(*iv*) Straight descents and descending turns.

(9) Performance manoeuvres ; including the applicant's knowledge and performance of the following tasks—

(*i*) Steep turns.

(*ii*) Steep spirals (SE).

(*iii*) Chandelles (SE).

(*iv*) Lazy eights (SE).

(10) Ground reference manoeuvres ; including the applicant's knowledge and performance of the following tasks—

(*i*) Rectangular course.

(*ii*) S-turns across a road.

(*iii*) Turns around a point.

(*iv*) Eights on pylons (SE).

(11) Slow flight, stalls and spins ; including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring during slow flight.

(*ii*) Power-on stalls (proficiency).

(*iii*) Power-off stalls (proficiency).

(*iv*) Crossed-control stalls (demonstration) (SE).

(*v*) Elevator trim stalls (demonstration) (SE).

(*vi*) Secondary stalls (demonstration) (SE).

(*vii*) Spins (SEL).

(12) Basic instrument manoeuvres ; including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*) Constant airspeed climbs.

(*iii*) Constant airspeed descents.

(*iv*) Turns to headings.

(*v*) Recovery from unusual flight attitudes.

(13) Emergency operations (SE) ; including the applicant's knowledge and performance of the following tasks—

(*i*) Emergency approach and landing (simulated).

(*ii*) Systems and equipment malfunctions.

(*iii*) Emergency equipment and survival gear.

(14) Emergency operations (ME) ; including the applicant's knowledge and performance of the following tasks—

(*i*) Systems and equipment malfunctions.

(*ii*) Engine failure during takeoff before VMC.

(*iii*) Engine failure after lift-off.

(*iv*) Approach and landing with an inoperative engine.

(*v*) Emergency descent.

(*vi*) Emergency equipment and survival gear.

(15) Multi-engine operations (ME) ; including the applicant's knowledge and performance of the following tasks—

(*i*) Operation of systems.

(*ii*) Performance and limitations.

(*iii*) Flight principles - engine inoperative.

(*iv*) Manoeuvring with one engine inoperative.

(*v*) VMC demonstration.

(*vi*) Demonstrating the effects of various airspeeds and configurations during engine inoperative performance.

(16) Post-flight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Post-flight procedures.

(*ii*) Anchoring (S).

(*iii*) Docking and mooring (S).

(*iv*) Beaching (S).

(*v*) Ramping (S).

(*b*) *Helicopter Category* : The skill test and proficiency check for the flight instructor rating - helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category, and if applicable, class or type, of aircraft :

(1) Fundamentals of instruction ; including the applicant's knowledge and performance of the following tasks—

(*i*) The learning process.

(*ii*) The teaching process.

(*iii*) Teaching methods.

(*iv*) Evaluation.

(*v*) Flight instructor characteristics and responsibilities.

(*vi*) Human factors.

(*vii*) Planning instructional activity.

(2) Technical subject areas ; including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual Scanning and collision avoidance.

(*iii*) Use of distractions during flight training.

(*iv*) Principles of flight.

(*v*) Helicopter flight controls.

(*vi*) Helicopter weight and balance.

(*vii*) Navigation and flight planning.

(*viii*) Night operations.

(*ix*) Regulations and publications.

(*x*) Use of minimum equipment list.

(*xi*) National airspace system.

(*xii*) Logbook entries and licence endorsements.

(3) Preflight preparation including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Operation of systems.

(*iv*) Performance and limitations.

(*v*) Airworthiness requirements.

(4) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's knowledge and performance of the following task—

(*i*) Manoeuvre lesson.

(5) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine starting and rotor engagement.

(*iv*) Before takeoff check.

(6) Aerodrome operations and Heliport operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications and ATC light signals.

(*ii*) Traffic patterns.

(*iii*) Aerodrome and Heliport Markings and lighting.

(7) Hovering Manoeuvres. including the applicant's knowledge and performance of the following tasks—

(*i*) Vertical takeoff and landing.

(*ii*) Surface taxi.

(*iii*) Hover taxi.

(*iv*) Air taxi.

(*v*) Slope operation.

(8) Takeoffs, landings and go-arounds, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and crosswind takeoff and climb.

(*ii*) Maximum performance takeoff and climb.

(*iii*) Rolling takeoff.

(*iv*) Normal and crosswind approach.

(*v*) Steep approach.

(*vi*) Shallow approach and running/roll-on landing.

(*vii*) Go-around.

(9) Fundamentals of flight ; including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*) Level turns.

(*iii*) Straight climbs and climbing turns.

(*iv*) Straight descents and descending turns.

(10) Performance manoeuvres ; including the applicant's knowledge and performance of the following tasks—

(*i*) Rapid deceleration.

(*ii*) Straight-in autorotation.

(*iii*) 180 degrees autorotation.

(11) Emergency operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Power failure at a hover.

(*ii*) Power failure at altitude.

(*iii*) Settling-with-power.

(*iv*) Low rotor RPM recovery.

(*v*) Antitorque system failure.

(*vi*) Dynamic rollover.

(*vii*) Ground resonance.

(*viii*) Low "*G*" conditions.

(*ix*) Systems and equipment malfunctions.

(*x*) Emergency equipment and survival gear.

(12) Special operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Confined area operation.

(*ii*) Pinnacle/platform operation.

(13) Post-flight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) After-landing and securing.

(*c*) Powered-lift Category.

(1) Reserved.

(*d*) *Airship Category* : The skill test and proficiency check for the flight instructor rating-airship shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft :

(1) Fundamentals of instruction ; including the applicant's knowledge and performance of the following tasks-

(*i*) The learning process.

(*ii*) The teaching process.

(*iii*) Teaching methods.

(*iv*) Evaluation.

(*v*) Flight instructor characteristics and responsibilities.

(*vi*) Human factors.

(*vii*) Planning instructional activity.

(2) Technical subject areas ; including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual Scanning and collision avoidance.

(*iii*) Use of distractions during flight training.

(*iv*) Principles of flight.

(*v*) Airship weight-off, ballast, and trim.

(*vi*) Night operations.

(*vii*) Regulations and publications.

(*viii*) National airspace system.

(*ix*) Logbook entries and licence endorsement.

(3) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Cross-country flight planning.

(*iv*) Performance and limitations.

(*v*) Operations of systems.

(4) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's and performance of the following tasks—

(*i*) Manoeuvre lesson.

(5) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection.

(*ii*) Cockpit management.

(*iii*) Engine starting.

(*iv*) Unmasting and positioning for takeoff.

(*v*) Ground handling.

(*vi*) Before takeoff check.

(6) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.

(*ii*) Traffic pattern operations.

(*iii*) Aerodrome, runway and taxiway markings and lighting.

(7) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Flight to, from, and at pressure height.

(*ii*) In-flight weigh-off.

(*iii*) Manual pressure control.

(*iv*) Static and dynamic trim.

(8) Navigation, including the applicant's knowledge and performance of the following tasks—

(*i*) Pilotage and dead reckoning.

(*ii*) Diversion.

(*iii*) Lost procedures.

(*iv*) Navigation systems and air traffic control radar services.

(9) Basic instrument manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and level flight.

(*ii*) Constant airspeed climbs.

(*iii*) Constant airspeed descents.

(*iv*) Turns to headings.

(*v*) Recovery from unusual flight attitudes.

(10) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Aborted takeoff.

(*ii*) Engine failure during takeoff.

(*iii*) Engine failure during flight.

(*iv*) Engine fire during flight.

(*v*) Envelope emergencies.

(*vi*) Free ballooning.

(*vii*) Ditching and emergency landing.

(*viii*) Systems and equipment malfunctions.

(11) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Masting.

(*ii*) Post-masting.

(*e*) *Balloon Category* : The skill test and proficiency check for the flight instructor rating with balloon instructor rating shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category and class of aircraft :

Note : When (BH) is indicated, the item is for hot air balloons only. When (BG) is indicated, the item is for gas balloons.

(1) Fundamentals of instruction ; including the applicant's knowledge and performance of the following tasks—

(*i*) The learning process.

(*ii*) The teaching process.

(*iii*) Teaching methods.

(*iv*) Evaluation.

(*v*) Flight instructor characteristics and responsibilities.

(*vi*) Human factors.

(*vii*) Planning instructional activity.

(2) Technical subject areas ; including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual Scanning and collision avoidance.

(*iii*) Use of distractions during flight training.

(*iv*) Principles of flight.

(*v*) Regulations and publications.

(*vi*) National airspace system.

(*vii*) Logbook entries and licence endorsement.

(3) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.

(*ii*) Weather information.

(*iii*) Cross-country flight planning.

(*iv*) Performance and limitations.

(*v*) Operations of systems.

(4) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's and performance of the following tasks—

(*i*) Manoeuvre lesson.

(5) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Launch site selection.

(*ii*) Crew briefing and preparation.

(*iii*) Layout and assembly.

(*iv*) Preflight inspection.

(*v*) Inflation.

(*vi*) Basket/gondola management.

(*vii*) Pre-launch check.

(6) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.

(7) Launches and landings, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal launch.

(*ii*) Launch over obstacle.

(*iii*) Approach to landing.

(*iv*) Steep approach to landing.

(*v*) Normal landing.

(*vi*) High-wind landing.

(8) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Ascents.

(*ii*) Altitude control (level flight).

(*iii*) Descents.

(*iv*) Rapid ascent and descent.

(*v*) Contour flying (BH).

(*vi*) High altitude flight (BG).

(*vii*) Obstacle avoidance (BH).

(*viii*) Tethering (BH).

(*ix*) Winter flying.

(*x*) Mountain flying.

(*xi*) Navigation, including the applicant's knowledge and performance of the following tasks—

(*A*) Navigation.

(9) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Systems and equipment malfunctions.

(*ii*) Emergency equipment and survival gear.

(*iii*) Water landing.

(*iv*) Thermal flight.

(10) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) Recovery.

(11) Deflation and pack-up.

(*i*) Refueling (BH).

(*f*) *Glider Category* : The skill test and proficiency check for the flight instructor rating - glider shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft :

(1) Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—

(*i*) The learning process.

(*ii*) The teaching process.

(*iii*) Teaching methods.

(*iv*) Evaluation.

(*v*) Flight instructor characteristics and responsibilities.

(*vi*) Human factors.

(*vii*) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

(*i*) Aeromedical factors.

(*ii*) Visual Scanning and collision avoidance.

(*iii*) Use of distractions during flight training.

(*iv*) Principles of flight.
(*v*) Elevators, ailerons, and rudder.
(*vi*) Trim, lift and drag devices.
(*vii*) Glider weight and balance.
(*viii*) Navigation and flight planning.
(*ix*) Regulations and publications.
(*x*) National airspace system.
(*xi*) Logbook entries and licence endorsements.

(3) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

(*i*) Licences and documents.
(*ii*) Weather information.
(*iii*) Operation of systems.
(*iv*) Performance and limitations.

(4) Preflight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task-—

(*i*) Manoeuvre lesson.

(5) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) Assembly.
(*ii*) Ground handling.
(*iii*) Preflight inspection.
(*iv*) Cockpit management.
(*v*) Visual signals.

(6)Aerodrome operations and gliderport operations; including the applicant's knowledge and performance of the following tasks—

(*i*) Radio communications.
(*ii*) Traffic patterns.
(*iii*) Aerodrome, runway, and taxiway signs, markings and lighting.

(7) Launches- aero tow, including the applicant's knowledge and performance of the following tasks—

(*i*) Before takeoff checks.
(*ii*) Normal and crosswind takeoff.
(*iii*) Maintaining tow positions.
(*iv*) Slack line.
(*v*) Boxing the wake.
(*vi*) Tow release.
(*vii*) Abnormal occurrences.

(8) Launches-ground tow (auto or winch), including the applicant's knowledge and performance of the following tasks—

(i) Before takeoff check.

(ii) Normal and crosswind takeoff.

(*iii*) Abnormal occurrences.

(9) Launches- self-launch, including the applicant's knowledge and performance of the following tasks—

(*i*) Engine starting.

(*ii*) Taxiing.

(*iii*) Before takeoff check.

(*iv*) Normal and crosswind takeoff and climb.

(*v*) Engine shutdown in flight.

(*vi*) Abnormal occurrences.

(10) Landings, including the applicant's knowledge and performance of the following tasks—

(*i*) Normal and cross wind landing.

(*ii*) Slips to landing.

(*iii*) Downwind landing.

(11) Fundamentals of flight, including the applicant's knowledge and performance of the following tasks—

(*i*) Straight glides.

(*ii*) Turns to headings.

(12) Performance airspeeds, including the applicant's knowledge and performance of the following tasks—

(*i*) Minimum sink airspeed.

(*ii*) Speed-to-fly.

(13) Soaring techniques, including the applicant's knowledge and performance of the following tasks—

(*i*) Thermal soaring.

(*ii*) Ridge and slope soaring.

(*iii*) Wave soaring.

(14) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(*i*) Steep turns

(*ii*) Recovery from a spiral dive.

(15) Slow flight and stalls, including the applicant's knowledge and performance of the following tasks—

(*i*) Manoeuvring at minimum control airspeed.

(*ii*) Stall recognition and recovery.

(*iii*) Spins.

(16) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(*i*) Simulated off-aerodrome landing.

(*ii*) Emergency equipment and survival gear.

(17) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(*i*) After-landing and securing.

(g) *Flight Instructor for Instrument Ratings* (*A, H, and PL*) : The skill test and proficiency for the flight instructor for instrument ratings - aeroplane, helicopter and powered-lift shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category, and if applicable class, of aircraft :

Note 1 : When (SE) is indicated, the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated, the item and paragraph are for single-engine and multi-engine.

Note 2 : When (*A*) is indicated, the item or paragraph is only for Aeroplane. When (H) is indicated, the item or paragraph is only for Helicopter. When nothing is indicated, the item and the paragraph are for all categories.

(1) Fundamentals of instructing ; including the applicant's knowledge and performance of the following tasks—

(*i*) The learning process.

(*ii*) Human behaviour and effective communication.

(*iii*) The teaching process.

(*iv*) Teaching methods.

(*v*) Critique and evaluation.

(*vi*) Flight instructor characteristics and responsibilities.

(*vii*) Planning instructional activity.

(2) Technical subject areas ; including the applicant's knowledge and performance of the following tasks—

(*i*) Aircraft flight instruments and navigation equipment.

(*ii*) Aeromedical factors.

(*iii*) Regulations and publications related to IFR operations.

(*iv*) Logbook entries related to instrument instruction.

(3) Preflight preparation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Weather information.

(*ii*) Cross-country flight planning.

(*iii*) Instrument cockpit check.

(4) Preflight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task—

(*i*) Manoeuvre lesson.

(5) Air traffic control clearances and procedures; including the applicant's knowledge and performance of the following tasks—

(*i*) Air traffic control clearances.

(*ii*) Compliance with departure, en-route and arrival procedures and clearances.

(6) Flight by reference to instruments; including the applicant's knowledge and performance of the following tasks—

(*i*) Straight-and-level flight.

(*ii*) Turns.

(*iii*) Change of airspeed in straight-and-level and turning flight.

(*iv*) Constant airspeed climbs and descents.

(*v*) Constant rate climbs and descents.

(*vi*) Timed turns to magnetic compass headings.

(*vii*) Steep turns.

(*viii*) Recovery from unusual flight altitudes.

(7) Navigation systems ; including the applicant's knowledge and performance of the following tasks—

(*i*) Intercepting and tracking navigational systems and DME Arcs.

(*ii*) Holding procedures.

(8) Instrument approach procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Non-precision instrument approach.

(*ii*) Precision instrument approach.

(*iii*) Missed approach.

(*iv*) Circling approach (*A*).

(*v*) Landing from a straight-in approach.

(9) Emergency operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Loss of communications.

(*ii*) Loss of gyro attitude and heading indicators.

(*iii*) Engine failure during straight-and-level flight and turns.

(*iv*) Instrument approach - one engine inoperative.

(10) Post-flight procedures ; including the applicant's knowledge and performance of the following task—

(*i*) Checking instruments and equipment.

(*h*) *Flight Instructor for Additional Type Ratings* : The skill test and proficiency checks for instructors for additional type ratings-aeroplane and helicopter shall include at least the following areas of operation :

Note : When (*A*) is indicated, the item or paragraph is only for Aeroplane. When (H) is indicated, the item or paragraph is only for Helicopter. When nothing is indicated, the item and the paragraph are for A and H.

(1) Technical subject areas.

(*i*) The content of the technical subject areas shall cover the areas as applicable to the aircraft class or type.

(*ii*) Flight simulator ; including the applicant's knowledge and performance of the following tasks—

(*a*) Use of checklist, setting of radios/navigation aids.

(*b*) Starting engines.

(*c*) Takeoff checks.

(*d*) Instrument takeoff, transition to instruments after lift off.

(*e*) Engine failure during take-off between V1 and V2 (Aeroplane).

(*f*) Aborted takeoff prior to reaching V1 (A).

(*g*) High mach buffeting, specific flight characteristics (if necessary) (A).

(*h*) Takeoff with engine failure prior to TDP or DPATO or shortly after TDP or DPATO (Helicopter).

(*i*) Steep turns.

(*j*) Recovery from approach to stall/takeoff, clean landing configuration (Aeroplane).

(*k*) Instrument approach to required minimum decision height or minimum descent height/altitude, manual one engine simulated inoperative during approach and landing or go-around (Aeroplane).

(*l*) Instrument approach to required minimum decision height or minimum descent height/altitude, autopilot one engine simulated inoperative during approach and landing or go-around (Helicopter).

(*m*) Rejected landing and go-around.

(*n*) Crosswind landing.

(*iii*) Category II and II operations, if applicable ; including the applicant's knowledge and performance of the following tasks—

(*a*) Precision approaches, automatic with auto-throttle and flight director go-around caused by aircraft or ground equipment deficiencies.

(*b*) Go-around caused by weather conditions.

(*c*) Go-around at DH caused by offset position from centreline.

(*d*) One of the CAT II/CAT III approaches must lead to a landing.

(*iv*) Aircraft ; including the applicant's knowledge and performance of the following tasks—

(*a*) Familiarisation with controls during outside checks.

(*b*) Use of checklist, setting of radios and navigation aids, starting engines.

(*c*) Taxiing.

(*d*) Takeoff.

(*e*) Engine failure during takeoff short after V2, after reaching climb out attitude (Aeroplane).

(*f*) Engine failure during takeoff short after TDP or DPATO after reaching climb out attitude (Helicopter).

(*g*) Other emergency procedures (if necessary).

(*h*) Instrument approaches to required minimum decision height, manual one engine out during approach and landing or go-around.

(*i*) One engine simulated inoperative go-around from required minimum decision height.

(*j*) One engine (critical) simulated inoperative landing.

Skill Test for Designated Pilot Examiners

IS 2.3.10.1.—(*a*) The skill test for initial designation of a pilot examiner, issuance of additional designations, and renewal of examiner designations shall contain both the appropriate oral questioning and aircraft or flight simulation training device performance in accordance with the applicable skill test for the aircraft category, and or class/type ratings as applicable.

(*b*) Methods of skill testing. The Authority inspector will choose one of the following methods to test an examiner pilot applicant. The methods are listed in order of preference but scheduling difficulties may preclude use of the preferred method of testing.

(1) Authority inspector evaluates the pilot examiner applicant testing an actual pilot applicant for a licence or rating.

(*i*) The Authority will arrange for the pilot examiner applicant to conduct a skill test for an actual pilot applicant for a licence or rating appropriate to the examiner designation sought, and the Authority inspector will observe the test from within the aircraft.

(*ii*) The Authority inspector will evaluate the pilot examiner applicant's performance while the pilot examiner applicant evaluates the pilot applicant.

(*iii*) Any discussion between the pilot examiner applicant and the Authority inspector concerning the pilot examiner applicant's performance with the pilot applicant will be held in private.

(*iv*) At the conclusion of the skill test for the actual pilot licence or rating :

(*A*) If the applicant has passed the skill test, the pilot examiner applicant will fill out the appropriate documentation for the pilot applicant while the Authority inspector observes. The Authority inspector will sign any documentation needed.

(*B*) If the pilot applicant does not pass the skill test, the Authority inspector will complete and sign the appropriate document needed.

(2) Authority inspector playing the role of pilot applicant for a skill test.

(*i*) The Authority inspector will play the role of a pilot applicant for a skill test appropriate to the type of designation the pilot examiner applicant is seeking.

(*ii*) If the Authority inspector answers a question incorrectly to test whether the pilot examiner applicant recognises an incorrect answer, the incorrect response must be obviously wrong.

(3) Authority inspector gives a flight skill test to the pilot examiner applicant.

(*i*) The Authority inspector will test the pilot examiner applicant on selected manoeuvres in order to assess the pilot examiner applicant's flight proficiency and ability to evaluate a pilot applicant in accordance with the appropriate skill test.

(*ii*) The Authority inspector will evaluate the pilot examiner applicant's plan of action for completeness and efficiency.

Flight Engineer : Skill Test and Proficiency Check.

IS 2.4.4.4.—(*a*) The skill test and proficiency check for the flight engineer licence shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft :

(1) Preflight preparation ; including the applicant's knowledge and performance of the following tasks—

(*i*) Equipment examination-systems knowledge.

(*ii*) Aircraft handbooks, manuals, minimum equipment list (MEL), configuration deviation list (CDL) and operations specifications.

(*iii*) Performance and limitations.

(2) Preflight procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Preflight inspection and cockpit setup.

(*ii*) Preflight inspection-exterior.

(3) Ground operations ; including the applicant's knowledge and performance of the following tasks—

(*i*) Powerplant start.

(*ii*) Taxi and pre-takeoff checks.

(4) Normal procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Takeoff.

(*ii*) In-flight.

(*iii*) During approach and landing.

(*iv*) Engine systems monitoring.

(5) Abnormal and emergency procedures ; including the applicant's knowledge and performance of the following tasks—

(*i*) Takeoff.

(*ii*) In-flight.

(*iii*) During approach and landing.

(*iv*) Engine systems monitoring.

(*v*) Postflight procedures.

(*vi*) After landing.

(*vii*) Parking and securing.

Skill Test for Designated Flight Engineer Examiners.

IS 2.4.6.2.—(*a*) The skill test for initial designation of a flight engineer examiner, issuance of additional class rating designations, and renewal of examiner designations shall contain both the appropriate oral questioning and aircraft or flight simulation training device performance in accordance with the applicable skill test for the aircraft and class ratings.

(*b*) *Methods of Skill Testing* : The Authority inspector will choose one of the following methods to test a flight engineer examiner applicant. The methods are listed in order of preference but scheduling difficulties may preclude use of the preferred method of testing.

(1) Authority inspector evaluates the flight engineer examiner applicant testing an actual flight engineer applicant for a licence and class rating or proficiency check.

(*i*) The Authority will arrange for the flight engineer examiner applicant to conduct a skill test for an actual flight engineer applicant for a licence or added rating or proficiency check appropriate to the examiner designation sought, and the Authority inspector will observe the test from within the aircraft or flight simulation training device as applicable.

(*ii*) The Authority inspector will evaluate the flight engineer examiner applicant's performance while the flight engineer examiner applicant evaluates the flight engineer applicant.

(*iii*) Any discussion between the flight engineer examiner applicant and the Authority inspector concerning the flight engineer examiner applicant's performance with the flight engineer applicant will be held in private.

(*a*) At the conclusion of the skill test for the actual flight engineer licence or added class rating or proficiency check :

(*b*) If the applicant has passed the skill test or proficiency check, the pilot examiner applicant will fill out the appropriate documentation for the flight engineer applicant while the Authority inspector observes. The Authority inspector will sign any documentation needed.

(2) If the flight engineer applicant does not pass the skill test or proficiency check, the Authority inspector will complete and sign the appropriate document needed.

(*i*) Authority inspector playing the role of flight engineer applicant for a skill test.

(*ii*) The Authority inspector will play the role of a flight engineer applicant for a skill test appropriate to the class of designation the flight engineer examiner applicant is seeking.

(*iii*) If the Authority inspector answers a question incorrectly to test whether the flight engineer examiner applicant recognises an incorrect answer, the incorrect response must be obviously wrong.

(3) Authority inspector gives a flight skill test to the flight engineer examiner applicant.

(*i*) The Authority inspector will test the flight engineer examiner applicant on selected manoeuvres in order to assess the flight engineer examiner applicant's flight proficiency and ability to evaluate a flight engineer applicant in accordance with the appropriate skill test.

(*ii*) The Authority inspector will evaluate the flight engineer examiner applicant's plan of action for completeness and efficiency.

Knowledge Requirements for ATSEP Licence/ Ratings.

IS 2.5.3.6.—(*a*) The applicant for a communications rating shall pass a knowledge test covering at least the following areas—

(*i*) Elements of Voice Communications ;

(*ii*) Radio Waves ;

(*iii*) Antenna Systems ;

(*iv*) VHF Radio Transmitters ;

(*v*) VHF Radio Receivers ;

(*vi*) Controller Work Positions ;

(*vii*) ATIS and VOLMET Service ;

(*viii*) Air/Ground Voice Communications ;

(*ix*) VHF/UHF transmission and HF Transmission ;

(*x*) Emergency/ Backup Systems ;

(*xi*) Aircraft Equipment/On Board systems ;

(*xii*) Satellite Communications systems ;

(*xiii*) Ground/Ground Voice communications ;

(*xiv*) Telephone Switching/Interphone Switching/Hotline Switching ;

(*xv*) ATN/Data Communications Network systems ;

(*xvi*) Purpose and Use of Data Communication systems ;

(*xvii*) Interface Systems ;

(*xviii*) ACARS systems ;

(*xix*) Purpose and use of Data Communications ;

(*xx*) Data Communications in current use-PCM, E1 (DSI) framing, T1, Multiplexing, de-multiplexing, LAN, WAN etc ;

(*xxi*) Purpose and use of protocols ;

(*xxii*) Network Management ;

(*xxiii*) ATC Specific Networks and applications ;

(*xxiv*) ATC Voice Recorders ;

(*xxv*) Troubleshooting.

(*b*) The applicant for NAVAIDS rating shall pass a knowledge test covering at least the following areas :

(*i*) Principles and concept of VOR

(*ii*) Purpose and use of Navigation

(*iii*) System Coordinates/WGS-84

(*iv*) NDB/LB

(*v*) VOR/DVOR

(*vi*) ILS, MLS

(*vii*) DME

(*viii*) TACAN

(*ix*) Visual AIDS-VASIS, PAPI, Rotating Beacon

(*x*) Satellite Navigation

(*xi*) RNAV, RNP

(*xii*) Satellite Based Systems-GPS, GLONASS,GNSS,MTSAT, EGNOS

(*xiii*) Warning Systems-TCAS, GPWS

(*xiv*) ICAO recommendations, Annex10, Doc 8071

(*xv*) NAVAIDS Flight Inspections

(*xvi*) Troubleshooting

(*c*) The applicant of SURVEILLANCE (and RADARS) ratings shall pass a knowledge test covering at least the following areas :

(*i*) Terminology and units of measurement

(*ii*) Purpose and use of Surveillance and RADAR systems

(*iii*) Primary RADAR

(*iv*) Secondary RADAR

(v) Weather Range

(*vi*) Precision Approach RADAR

(*vii*) Surface movement and control

(*viii*) RADAR message format

(*ix*) Transmission of Radar Data

(*x*) Mode S

(*xi*) ADS-B System

(*xii*) Future Equipment

(*xiii*) Radar Station

(*xiv*) Networks-Analogue/Digital, Digital/Analogue, PCM, BIT RATE, Bandwidth

(*xv*) Purpose and use of Data Communications

(xvi) Data Communications in current use-PCM, E1 (DSI) framing, T1, Multiplexing, de-multiplexing, LAN, WAN etc.

(*xvii*) Purpose and use of protocols

(*xviii*) Network Management

(*xix*) ATC Specific Networks and application

(*xx*) System Soft and Hardware principles

(*xxi*) RADAR Data processing

(*xxii*) Warning systems

(*xxiii*) Flight Data Processing

(*xxiv*) Operational Display systems

(*xxv*) Human Machine Interface (HMI)

(*xxvi*) Troubleshooting

(*d*) The applicant for Airfield Lighting/Visual Landing Aids Systems ratings shall pass a knowledge test covering at least the following areas—

(*i*) Purpose and use of Airfield Lighting/Visual Landing Navigational Aids systems

(*ii*) Airfield Landing Systems

(*iii*) Airfield Lighting Equipment

(*iv*) Approach Light

(*v*) Approach Slope Indicator

(*vi*) Airfield Runway and Taxiway fixtures

(*vii*) Obstruction Lights

(*viii*) Docking Systems

(*ix*) Illuminated Wing sleeves

(*x*) Frangibility of Visual Aids

(*xi*) Constant Current regulator

(*xii*) Control Systems

(*xiii*) Safety

(*xiv*) Airfield Light Cables

(*xv*) Test Equipment

(*xvi*) Sign/Signage

(*xvii*) Visual Landing Systems-PAPI, VASI, RVR and Rotation Beacons

(*xviii*) Standby Power systems

(*xix*) PAPI System Set-up/Calibrations

(*xx*) Troubleshooting

IS 2.5.3.8.—(*a*) Each applicant for an Air Traffic Safety Electronics Personnel (ATSEP) licence or rating shall pass a skill test containing both oral questioning and practical application of skill appropriate to the rating(s) sought. The tests cover the applicant's skill in performing the practical projects on the subjects covered by the written test for that rating. The applicant will be provided with appropriate facilities, tools and materials.

Air Traffic Safety Electronics Personnel Licence Skill Requirements.

(*b*) *ATSEP General* : The skill test for the ATSEP Licence shall test the applicant's knowledge and performance in at least the following areas of operation :

(1) Communication Systems

(*i*) Radio Waves

(*ii*) Antenna Systems

(*iii*) VHF Radio Transmitters

(*iv*) VHF Radio Receivers

(*v*) Controller Work Positions

(*vi*) ATIS and VOLMET Service

(*vii*) Air/Ground Voice Communications

(*viii*) VHF/UHF transmission and HF Transmission

(ix) Emergency/ Backup Systems

(x) Aircraft Equipment/On Board systems

(xi) Satellite Communications systems

(*xii*) Ground/Ground Voice communications

(*xiii*) Telephone Switching/Interphone Switching/Hotline Switching

(*xiv*) ATN/Data Communications Network systems

(*xv*) Purpose and Use of Data Communication systems

(*xvi*) Interface Systems

(*xvii*) ACARS systems

(*xviii*) Purpose and use of Data Communications

(*xix*) Data Communications in current use-PCM, E1 (DSI) framing, T1, Multiplexing, de-multiplexing, LAN, WAN etc.

(*xx*) Purpose and use of protocols

(*xxi*) Network Management

(*xxii*) ATC Specific Networks and applications

(*xxiii*) ATC Voice Recorders

(*xxiv*) Troubleshooting

(2) NAVAIDS

(*i*) Principles and concept of VOR

(*ii*) Purpose and use of Navigation

(*iii*) System Coordinates/WGS-84

(*iv*) NDB/LB

(*v*) VOR/DVOR

(*vi*) ILS, MLS

(*vii*) DME

(*viii*) TACAN

(*ix*) Visual AIDS-VASIS, PAPI, Rotating Beacon

(*x*) Satellite Navigation

(*xi*) RNAV, RNP

(*xii*) Satellite Based Systems-GPS, GLONASS,GNSS,MTSAT, EGNOS

(*xiii*) Warning Systems-TCAS, GPWS

(*xiv*) ICAO recommendations, Annex10, Doc 8071

(*xv*) NAVAIDS Flight Inspections

(*xvi*) Troubleshooting

(3) Surveillance Systems (RADAR)

(*i*) Terminology and units of measurement

(*ii*) Purpose and use of Surveillance and RADAR systems

(*iii*) Primary RADAR

(*iv*) Secondary RADAR

(*v*) Weather Range

(*vi*) Precision Approach RADAR

(*vii*) Surface movement and control

(*viii*) RADAR message format

(*ix*) Transmission of Radar Data

(*x*) Mode S

(*xi*) ADS-B System

(*xii*) Future Equipment

(*xiii*) Radar Station

(*xiv*) Networks-Analogue/Digital, Digital/Analogue, PCM, BIT RATE, Bandwidth

(*xv*) Purpose and use of Data Communications

(*xvi*) Data Communications in current use-PCM, E1 (DSI) framing, T1, Multiplexing, de-multiplexing, LAN, WAN etc.

(*xvii*) Purpose and use of protocols

(*xviii*) Network Management

(*xix*) ATC Specific Networks and application

(*xx*) System Soft and Hardware principles

(*xxi*) RADAR Data processing

(*xxii*) Warning systems

(*xxiii*) Flight Data Processing

(*xxiv*) Operational Display systems

(xxv) Human Machine Interface (HMI)

(*xxvi*) Troubleshooting

(4) Airfield Lighting/Visual Landing Aids Systems

(*i*) Purpose and use of Airfield Lighting/Visual Landing Navigational Aids systems

(*ii*) Airfield Landing Systems

(*iii*) Airfield Lighting Equipment

(*iv*) Approach Light

(*v*) Approach Slope Indicator

(*vi*) Airfield Runway and Taxiway fixtures

(*vii*) Obstruction Lights

(*viii*) Docking Systems

(*ix*) Illuminated Wing sleeves

(*x*) Frangibility of Visual Aids

(*xi*) Constant Current regulator

(*xii*) Control Systems

(*xiii*) Safety

(*xiv*) Airfield Light Cables

(*xv*) Test Equipment

(*xvi*) Sign/Signage

(*xvii*) Visual Landing Systems-PAPI, VASI, RVR and Rotation Beacons

(*xviii*) Standby Power systems

(*xix*) Troubleshooting

Ratings and Limitations Codes.

IS 2.6.2.3. —(*a*) Airframe.

Code 1 : Unpressurised Aeroplane

Code 2 : Pressurised Aeroplane

Code 3 : Rotorcraft

(*b*) Powerplant

Code 4 : Piston Engine

Code 5 : Turbine Engine

(*c*) Avionics

Code 6 : Aircraft Electrical Systems in which the main generation system output is DC including Alternator, having an individual power rating not exceeding 1.5KVA may be fitted only.

Code 7 : Aircraft Electrical Systems in which the main generation system output is DC and which have installed '*frequency*' wild alternators with an individual power ratings exceeding 1.5KVA for auxiliary services.

Code 8 : Aircraft Electrical Systems in which the main generation system output is constant '*frequency*' AC from generators driven by constant speed drive unit or variable speed constant frequency (VSCF) generation/converter systems, and DC power is supplied from transformer rectifier units.

Code 9 : General Aircraft Instrument Systems but excluding instruments installed on any aircraft which has installed in Flight Director System.

Code 10 : Flight Director Systems employing air driven gyroscopes (attitude) including Smiths flight systems and Sperry Zero Reader ZL1, ZL2 Flight Director System.

Code 11 : Flight Director Systems employing electrically driven gyroscopes (attitudes).

Code 12 : Direct Reading Compasses

Code 13 : Director and Remote Reading Compasses

Code 14 : Non-Radio-Coupled Automatic Pilots (Aeroplane)

Code 15 : Radio-Coupled Automatic Pilots (Aeroplane) excluding ILS Coupled (LOC and GS). Automatic Pilots.

Code 16 : ILS Coupled (LOC and GS) Automatic Pilots (Aeroplane).

Code 17 : Non-Radio Coupled Automatic Pilots (Rotorcraft)

Code 18 : Radio-Coupled Automatic Pilots (Rotorcraft)

Code 19 : Airborne Communications Systems, Airborne Navigation Systems

Code 20 : Airborne Radar Systems only.

IS 2.6.2.7. (*e*) Experience Requirements for an AME Type Rating.

Applicant for an AME type rating shall submit documentary evidence acceptable to the authority of practical experience in representative tasks of the following areas of aircraft maintenance :

1. General.

(*a*) Ground handling :

(*i*) Airframe and powerplant servicing

(*ii*) Aircraft towing and taxing

(*iii*) Aircraft lifting and weighing

(*iv*) Aircraft parking, moring, storing and return to service.

(*b*) Placards and Markings

(*c*) Minimum Equipment List application

2. Airframe Systems

Aircraft (Aeroplane and helicopters)-all systems of ATA chapters 21 to 38 ; Rotorcraft specific chapters 18, 60, 62-67.

(*i*) Removal and installation

(*ii*) Functional and operational testing

(*iii*) Troubleshooting and defect rectification

(*iv*) Fuelling, oil, hydraulic and oxygen servicing

3. Rotorcraft Specific

(*i*) Vibration and noise analysis

(*ii*) Monitoring and indicating of rotors.

4. Powerplant Systems.

(*a*) Piston engines- all systems of ATA chapters 70 to 84 and 60-61 (propellers) :

(*i*) Removal and installation (including engine change)

(*ii*) Functional and operational testing (engine ground run and performance check)

(*iii*) Troubleshooting and defect rectification

(*iv*) MEL application

(*b*) Gas turbine engines systems- all systems of ATA chapters 70B to 84 including FADEC and ch. 49

(*i*) Removal and installation (including engine change)

(*ii*) Functional and operational testing (engine ground run and performance check)

(*iii*) Troubleshooting and defect rectification

(*iv*) MEL application

5. *Avionics Systems*. All systems covered in ATA chapters 22, 23, 24, 31, 34

(*i*) Removal and installation

(*ii*) Functional and operational testing

(*iii*)Troubleshooting and defect rectification

Aircraft Maintenance Engineer Skill Requirements.

IS 2.6.2.7.—(*a*) Each applicant for an Aviation Maintenance Engineer (AME) licence or rating shall pass a skill test containing both oral questioning and practical application of skill appropriate to the rating(s) sought. The tests cover the applicant's skill in performing the practical projects on the subjects covered by the written test for that rating. The applicant will be provided with appropriate facilities, tools, materials and airworthiness data.

(*b*) AME General. The skill test for the AME Licence shall test the applicant's knowledge and performance in at least the following areas of operation :

(1) Basic electricity.

(2) Aircraft drawings.

(3) Weight and balance.

(4) Fluid line and fittings

(5) Materials and processes.

(6) Ground operation and servicing.

(7) Cleaning and corrosion control

(8) Mathematics.

(9) Maintenance forms and records.

(10) Basic physics.

(11) Maintenance publications.

(12) Aircraft mechanic technician privileges and limitations.

(*c*) *AME Airframe Rating*.—The skill test for the airframe operation :

(1) Wood structures.

(13) Aircraft covering.

(14) Aircraft finishes.

(15) Sheet metal and non-metallic structures.

(16) Welding.

(17) Assembly and rigging.

(18) Airframe inspection.

(19) Fuel systems.

(20) Aircraft landing gear systems.

(21) Hydraulic and pneumatic power systems.

(22) Cabin atmosphere control systems.

(23) Aircraft instrument systems.

(24) Communication and navigation systems.

(25) Aircraft fuel systems.

(26) Aircraft electrical systems.

(27) Position and warning systems.

(28) Ice and rain control systems.

(29) Fire protection systems.

(*c*) *AME Powerplant Rating*.—The skill test for the powerplant rating shall test the applicant's knowledge and performance in at least the following areas of operation :

(1) Reciprocating systems.

(2) Turbine engines.

(3) Engine inspection.

(4) Engine instrument systems.

(5) Engine fire protection systems.

(6) Engine electrical systems.

(7) Lubrication systems.

(8) Ignition and starting systems.

(9) Fuel metering.

(10) Engine fuel systems.

(11) Induction and engine airflow systems.

(12) Engine cooling systems.

(13) Engine exhaust and reverser systems.

(14) Propellers.

(15) Auxiliary power units.

(*d*) *AME Avionics Rating*.—The skill test for the avionics rating shall test the applicant's knowledge and performance in the basic workshop and maintenance practices in at least the following areas of operation :

(1) Avionics- electrical.

(2) Avionics-instrument.

(3) Avionics-autoflight.

(4) Avionics-radio.

(5) Avionics-navigation systems.

(6) Repair, maintenance and function testing of aircraft systems/ components-avionics.

(7) Job/task documentation and control practices.

Skill Test for the Flight Operations Officer Dispatcher Licence.

IS 2.8.3.2.—(*a*) The skill test for the flight operations officerdispatcher licence shall test the applicant's knowledge and performance in at least the following areas of operation :

(1) Flight planning/dispatch release, including the applicants' knowledge and performance of the following tasks—

(*i*) Regulatory requirements.

(*ii*) Meteorology.

(*iii*) Weather observations, analysis, and forecasts.

(*iv*) Weather related hazards.

(*v*) Aircraft systems, performance, and limitations.

(*vi*) Navigation and aircraft navigation systems.

(*vii*) Practical dispatch applications.

(*viii*) Manuals, handbooks and other written guidance.

(2) Preflight, takeoff, and departure, including the applicants' knowledge and performance of the following tasks—

(*i*) Air traffic control procedures.

(*ii*) Aerodrome, crew, and company procedures.

(3) In-flight procedures, including the applicants' knowledge and performance of the following tasks—

(*i*) Routing, re-routing, and flight plan filing.

(*ii*) En route communication procedures and requirements.

(4) Arrival, approach, and landing procedures, including the applicants' knowledge and performance of the following tasks—

(*i*) Air traffic control and air navigation procedures.

(5) Post flight procedures, including the applicants' knowledge and performance of the following tasks—

(*i*) Communication procedures and requirements.

(*ii*) Trip records.

(6)Abnormal and emergency procedures, including the applicants' knowledge and performance of the following tasks—

(*i*) Abnormal and emergency procedures.

IS 2.10.1.4. Senior Parachute Rigger Licence Skill Test.

(*a*) The skill test for the senior parachute rigger licence shall test the applicant's knowledge and performance in at least the following areas of operation:

(1) Certification, including the applicants' knowledge and performance of the following tasks—

(*i*) Senior Parachute Rigger experience requirements.

(*ii*) Senior Parachute Rigger test requirements.

(2) Privileges, limitations and operating rules, including the applicants' knowledge and performance of the following tasks—

(*i*) Senior Parachute Rigger privileges.

(*ii*) Required facilities and equipment.

(*iii*) Performance standards.

(*iv*) Recordation.

(*v*) Manufacturer's packing instructions.

(*vi*) Repair classifications.

(*vii*) Alterations.

(*viii*) Equipment requirements for intentional parachute jumping.

(*ix*) TSO 23c requirements.

(3) Packing parachutes, including the applicants' knowledge and performance of the following tasks—

(*i*) Packing round parachute.

(*ii*) Packing ram-air parachute.

(*iii*) Packing piggy-back container parachute.

(4) Parachute operation and care, including the applicants' knowledge and performance of the following tasks—

(*i*) Parachute storage.

(*ii*) Parachute drying and airing.

(*iii*) Parachute assembly inspection.

(*iv*) Cleaning parachute canopies.

(*v*) Parachute harness adjustment.

(*vi*) Pin-type static line requirements.

(*vii*) Break cord static line requirements.

(*viii*) Cleaning parachute harness/container.

(5) Parachute construction details, including the applicants' knowledge and performance of the following tasks—

(*i*) Seam construction defects.

(*ii*) Webbing joint construction.

(*iii*) Parachute construction knots.

(*iv*) Fabric construction.

(*v*) French fell seam construction.

(*vi*) Technical standard order TSO-C23c.

(*vii*) Technical standard order TSO-C23d.

(*viii*) Fastener tapes.

(*ix*) Finger loop construction.

(*x*) Radial seam construction.

(6) Parachute repair, including the applicants' knowledge and performance of the following tasks—

(*i*) Single canopy repair.

(*ii*) Replacement of lower control line (ram-air canopy).

(*iii*) Application of non-destructive test method TS-108.

(*iv*) Line attachment loop replacement.

(*v*) Removal and installation of grommets.

(*vi*) Sewing machine operation.

(*vii*) Cascade line replacement.

(*viii*) Nicopress sleeve installation.

(*ix*) Replacement of V-tab (butterfly tab).

(*x*) Replacement of continuous suspension line.

(*xi*) Suspension line replacement in ram-air canopy.

(*xii*) Container patching.

(*xiii*) Ram-air canopy repair limitations.

(*xiv*) Ram-air canopy repair adjacent to a seam.

Master Parachute Rigger Licence Skill Test.

IS 2.10.1.5.—(*a*) The skill test for the master parachute rigger licence shall test the applicant's knowledge and performance in at least the following areas of operation :

(1) Certification, including the applicants' knowledge and performance of the following tasks—

(*i*) Master Parachute Rigger experience requirements.

(*ii*) Master Parachute Rigger test requirements.

(2) Privileges, limitations and operating rules, including the applicants' knowledge and performance of the following tasks—

(*i*) Master Parachute Rigger privileges.

(*ii*) Required facilities and equipment.

(*iii*) Performance standards.

(*iv*) Recordation.

(*v*) Manufacturer's packing instructions.

(*vi*) Repair classifications.

(*vii*) Alterations.

(*viii*) Equipment requirements for intentional parachute jumping.

(*ix*) TSO 23c requirements.

(3) Packing parachutes, including the applicants' knowledge and performance of the following tasks—

(*i*) Packing round parachute.

(*ii*) Packing ram-air parachute.

(*iii*) Packing piggy-back container parachute.

(4) Parachute operation and care, including the applicants' knowledge and performance of the following tasks—

(*i*) Parachute storage.

(*ii*) Parachute drying and airing.

(*iii*) Parachute assembly inspection.

(*iv*) Cleaning parachute canopies.

(*v*) Parachute harness adjustment.

(*vi*) Pin-type static line requirements.

(*vii*) Break cord static line requirements.

(*viii*) Cleaning parachute harness/container.

(5) Parachute construction details, including the applicants' knowledge and performance of the following tasks—

(*i*) Seam construction defects.

(*ii*) Webbing joint construction.

(*iii*) Parachute construction knots.

(*iv*) Fabric construction.

(*v*) French fell seam construction.

(*vi*) Technical standard order TSO-C23c.

(*vii*) Technical standard order TSO-C23d.

(*viii*) Fastener tapes.

(*ix*) Finger loop construction.

(*x*) Radial seam construction.

(6) Parachute repair, including the applicants' knowledge and performance of the following tasks—

(*i*) Single canopy repair.

(*ii*) Replacement of lower control line (ram-air canopy).

(*iii*) Application of non-destructive test method TS-108.

(*iv*) Line attachment loop replacement.

(*v*) Removal and installation of grommets.

(*vi*) Sewing machine operation.

(*vii*) Cascade line replacement.

(*viii*) Nicopress sleeve installation.

(*ix*) Replacement of V-tab (butterfly tab).

(*x*) Replacement of continuous suspension line.

(*xi*) Suspension line replacement in ram-air canopy.

(*xii*) Container patching.

(*xiii*) Ram-air canopy repair limitations.

(*xiv*) Ram-air canopy repair adjacent to a seam.

(7) Parachute Alterations, including the applicants' knowledge and performance of the following tasks—

(*i*) Alteration data approval.

(*ii*) Install an automatic activation device.

(*iii*) Fabrication binding corners.

(*iv*) Altering riser connections.

(*v*) Bridle cord alteration.

(*vi*) Threading friction adapter.

(*vii*) D- or V-ring alteration.

(*viii*) Conversion of ripcord deployment to hand deployed pilot chute.

(*ix*) Fabricate a canopy deployment bag.

(*x*) Convert throw-out pilot chute from rear of leg position to the bottom of container position.

Type Ratings-parachute Rigger Licence Skill Test.

IS 2.10.1.6.—(*a*) The skill test for ratings or added ratings to a parachute rigger licence shall test the applicant's knowledge and performance in at least the following areas of operation applicable to the rating sought, including the applicant's knowledge and performance of the following :

(1) Additional rating requirements.

(2) Packing seat-type parachute.

(3) Packing back-type parachute (excluding piggy-back).

(4) Packing chest-type parachute.

(5) Packing lap-type parachute.

Authorised Aviation Medical Examiners.

IS 2.11.1.3.—(*a*) Basic training in aviation medicine for AAMEs shall include at least the following :

(1) Basic training in aviation medicine.

(2) Physics of atmosphere and space.

(3) Basic aeronautical knowledge.

(4) Aviation Physiology.

(5) Ophthalmology.

(6) Otorinolaryngology.

(7) Cardiology and general medicine.

(8) Neurology.

(9) Psychiatry in aviation medicine.

(10) Psychology.

(11) Dentistry.

(12) Accidents, Escape and Survival.

(13) Legislation, rules and regulations.

(14) Air evacuation.

(15) Medicine and flying.

(*b*) Advanced training in aviation medicine for AAMEs shall include the following :

(1) Pilot working environment.

(2) Aerospace physiology.

(3) Ophthalmology.

(4) Otorinolaryngology.

(5) Cardiology and general medicine.

(6) Neurology/Psychiatry.

(7) Human factors in aviation.

(8) Tropical medicine.

(9) Hygiene.

(10) Space medicine.

IS 2.11.1.8. Medical Certificate.

(*c*)(*b*) The following details shall appear on the medical certificate in the Roman alphabet :

(1) Name of State.

(2) Licence No.

(3) Name of holder in full;

(4) Date of birth.

(5) Address of holder.

(6) Nationality of holder.

(7) Signature of holder.

(8) Medical certificate Class 1, 2 or 3.

(9) Issuing Authority.

(10) Validity.

(11) Limitations.

(12) Date of issue and signature of Issuing Officer.

<table>
<tr><td colspan="3" align="center">Initial Medical Examination</td></tr>
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NIGERIA CIVIL AVIATION REGULATIONS

PART 3—APPROVED TRAINING ORGANISATIONS

INTRODUCTION

Part 3 of the Nigeria Civil Aviation Regulations (Nig. CARs) addresses the certification and administration of Approved Training Organisations (ATO). ICAO *Annex* 1 contains standards for approval of training organisations. Part 3 uses these standards and has also adapted them to cover other areas of airman training.

The regulations set forth in Part 3 allow for this situation. The regulations in Part 3 are based upon ICAO *Annex* 1, through Amendment 172, ICAO Doc 9841. Manual on the Approval of Training Organisations, Second Edition, 2011, and ICAO Doc 9869, Procedures for Air Navigation Services – Training (PANS-TRG), Amendment No. 2, 2013.

NIGERIA CIVIL AVIATION REGULATIONS

PART 3 — APPROVED TRAINING ORGANISATIONS

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NIGERIA CIVIL AVIATION REGULATIONS

PART 3—APPROVED TRAINING ORGANISATIONS

3.1. General

3.1.1.1—(*a*) Part 3 prescribes the requirements for issuing approvals to organisations for the training of aviation personnel, and prescribes the operating rules for the holders of an Approved Training Organisation (ATO) certificate. Applicability.

(*b*) The approval of a training organization by the Authority shall be dependent upon the applicant demonstrating compliance with the requirements of Part 3 of this regulations and the relevant provisions contained in Part 20

(c) Approved training for flight crew and air traffic controllers shall be conducted within an approved training organization.

(*d*) Competency-based approved training for aircraft maintenance personnel shall be conducted within an approved training organization.

3.1.1.2—(*a*) Definitions are contained in Nig. CARs Part 1. Definitions

3.1.1.3—(*a*) The following abbreviations are used in Part 3. Abbreviations.

(*i*)	A	Aeroplane
(*ii*)	AME	Aviation Maintenance Engineer
(*iii*)	ATCO	Air Traffic Controller
(*iv*)	ATO	Approved Training Organisation
(*v*)	ATPL	Airline Transport Pilot Licence
(*vi*)	CFI	Chief Flight Instructor
(*vii*)	CGI	Chief Ground Instructor
(*viii*)	CPL	Commercial Pilot Licence
(*ix*)	CRM	Crew Resource Management
(*x*)	FE	Flight Engineer
(*xi*)	FSTDs	Flight Synthetic Training Devices
(*xii*)	H	Helicopter
(*xiii*)	IFR	Instrument Flight Rules
(*xiv*)	ICAO	International Civil Aviation Organisation
(*xv*)	MMEL	Master Minimum Equipment List
(*xvi*)	MPL	Multi-crew Pilot Licence
(*xvii*)	PIC	Pilot-in-Command
(*xviii*)	PPL	Private Pilot Licence
(*xix*)	QA	Quality Assurance
(*xx*)	RT	Radiotelephony
(*xxi*)	VFR	Visual Flight Rules

Exemption Authority.

3.1.1.4.—(*a*) The Authority may, upon consideration of the circumstances of a particular ATO, issue an exemption providing relief from specified sections of this Part, provided that the Authority finds that the circumstances presented warrant the exemption and that a level of safety will be maintained equal to that provided by the rule from which the exemption is sought.

(*b*) An exemption may be terminated or amended at any time by the Authority.

(*c*) A request for exemption must be made in accordance with the requirements in Nig. CARs Part 1.

(*d*) Each ATO that receives an exemption must have a means of notifying the appropriate management and personnel of the exemption.

3.2. CERTIFICATION OF A TRAINING ORGANISATION AND CONTINUED VALIDITY

Applicability.

3.2.1.1.—(*a*) This section prescribes the requirements for the certification of a training organisation and continued validity of the certificate.

3.2.1.2. GENERAL

(*a*) The Authority may approve an ATO to provide the following :

(*i*) Any training activity that leads toward the issuance of a licence, rating, authorisation or approval.

(*ii*) Provision of training services necessary for an operator to meet the requirements of Nig. CARs Part 9

(*iii*) Special curricula training designed to meet :

(1) Qualification-based training requirements, including those deemed acceptable through the approval of an 'alternate means of compliance' mechanism, or

(2) Competency based training and assessment requirements, or

(3) Those training requirements deemed acceptable through the approval of an 'alternative means of compliance' mechanism.

(*b*) No person may operate as a certificated ATO without, or in violation of, an approved training organisation certificate, ratings or training specifications issued under this part.

(*c*) The ATO shall display the ATO certificate in a place accessible to the public in the principal place of business of the training centre.

(*d*) The certificate and training specifications issued to an approved training organisation shall be available on the premises for inspection by the public and the Authority.

(*e*) The approval of a training organisation by the Authority shall be dependent upon the applicant demonstrating compliance with the requirements of this part and the safety management requirements of Nig. CARs Part 20.

3.2.1.3—*(a)* The ATO certificate will consist of two documents— Approved Training Organisation Certificate.

(*i*) A one page certificate signed by the Authority ; and

(*ii*) A multi-page training specifications signed by the Accountable Manager and the Authority contains the terms, conditions, and authorisations.

(*b*) An ATO shall perform training, checking and testing, or part thereof, only for which it is rated and within the terms, conditions, and authorisations placed in its training specifications.

(*c*) The ATO certificate will contain the following items and be in a format as shown in IS : 3.2.1.3—

(*i*) The certificate number specifically assigned to the ATO ;

(*ii*) The name and location (principal place of business) of the ATO ;

(*iii*) The date of issue and period of validity ;

(*iv*) Terms of approval relating to the courses to be taught ; and

(*v*) Authority signature.

(*d*) The training specifications will contain the following—

(*i*) The certificate number specifically assigned to the ATO ;

(*ii*) The type of training authorised, including approved courses ;

(*iii*) Authorisations for the ATO; including special approvals and limitations ;

(*iv*) The name and address of any satellite training centers, and the approved training offered at each location ;

(*v*) The facilities and equipment required to conduct the training authorised ;

(*vi*) The staff required to perform the applicable duties under this Part ;

(*vii*) Accountable manager and Authority signatures ;

(*viii*) The date issued or revised ; and

(*ix*) Other items the Authority may require or allow.

3.2.1.4—(*a*) No training organisation may advertise as a certificated approved training organisation until an approved training organisation certificate has been issued to that facility. Advertising

(*b*) No certificated approved training organisation may make any statement, either in writing or orally, about itself that is false or is designed to mislead any person.

(*c*) Whenever the advertising of an approved training organisation indicates that it is certificated, the advertisement must clearly state the approved training organisation's certificate number.

Application for an ATO Certificate

3.2.1.5—(*a*) The application for approval of a training organisation shall be made in a form and in a manner acceptable to the Authority.

(*b*) Each application must be made at least 120 calendar days before the beginning of any proposed training or 90 days before effecting an amendment to any approved training, unless a short filing period is approved by the Authority.

(*c*) Each applicant shall provide—

(*i*) A statement showing that the minimum qualification requirements for each management position are met or exceeded ;

(*ii*) A statement acknowledging that the applicant shall notify the Authority within 10 working days of any change made in the assignment of persons in the required management positions ;

(*iii*) The proposed training authorisations and training specifications requested by the applicant ;

(*iv*) The proposed location of each training facility and any satellite facility location, the proposed courses to be taught at each location, and the equipment at each location including Flight Synthetic Training Devices (FSTDs), training aircraft and any aerodromes or sites to be used ;

(*v*) Two copies of its proposed Training and Procedures manual;

(*vi*) Two copies of each proposed training course curriculum, including syllabi, outlines, courseware, procedures, and documentation to support the curriculum for which approval is sought ;

(*vii*) Documentation of the training organisation's quality assurance and quality system ;

(viii) A statement of the maximum number of students it expects to teach at any one time ;

(*ix*) Documentation of the training organisation's Safety Management System ;

(*x*) A statement of compliance to all applicable Nig. CARs for the proposed training, including pertinent sub-parts and each relevant section of the Regulation, which should be identified and accompanied by a brief description.

(*xi*) Any additional information the Authority requires the applicant to submit.

Issuance of an ATO Certificate

3.2.1.6—(*a*) An applicant may be issued an ATO certificate if, after investigation, the Authority finds that the applicant—

(*i*) Meets the applicable regulations and standards for an ATO certificate, and (*ii*) Is properly and adequately equipped for the performance of the training for which it seeks approval.

(*iii*) Payment of appropriate fees/charges.

Duration and Renewal of ATO Certificate

3.2.1.7—(*a*) A certificate issued to an ATO, located either inside or outside Nigeria shall, be effective from the date of issue until—

(*i*) The 12th month after the date on which it was initially issued, subject to satisfactory compliance with the requirements of this Part; or

(*ii*) The 24th month after the date on which it was renewed, subject to satisfactory compliance with the requirements of this Part; or

(*iii*) The ATO surrenders the certificate, or

(*iv*) The Authority suspends or revokes the certificate.

(*b*) The holder of a certificate that expires or is surrendered, suspended, or revoked by the Authority shall return the certificate and training specifications to the Authority within7 days of expiration, surrender or receipt from the Authority of notice of suspension or revocation.

(*c*) A certificated ATO that applies for a renewal of its certificate shall submit its request for renewal not later than 90 days before the current certificate expires. If a request for renewal is not made within this period, the ATO shall follow the application procedures for initial issuance as prescribed by the Authority.

Continued Validity of Approval.

3.2.1.8—(*a*) Unless the approval has previously been surrendered, superseded, suspended, revoked or expired by virtue of exceeding any expiration date that may be specified in the approval certificate, the continued validity of approval is dependent upon—

(*i*) The ATO remaining in compliance with this Part;

(*ii*) The Authority being granted access to the organisation's facilities to determine continued compliance with this Regulation; and

(*iii*) The payment of any charges prescribed by the Authority.

Inspection.

3.2.1.9—(*a*) The Authority may, at any time, inspect an ATO holder on the ATO holder's premises to determine the ATO's compliance with this Part.

(*b*) Inspections will be conducted at least annually.

(*c*) After an inspection is made, the certificate holder will be notified, in writing, of any deficiencies found during the inspection.

(*d*) Inspection will also be performed on the applicant for, or the holder of, an ATO certificate held outside Nigeria. This inspection may be delegated to the Authority of the State where the ATO is located, provided an arrangement exists.

Suspension or Revocation.

3.2.1.10.—(*a*) The Authority may suspend or revoke an ATO certificate if it is established that a certificate holder has not met, or no longer meets the requirements of Part 3.

Changes to the Ato and Certificated Amendment.

3.2.1.11.—(*a*) To enable the Authority to determine continued compliance with this Part, the ATO shall provide written notification to the Authority for approval at least 90 days prior to any of the following changes—

(*i*) The name of the organisation ;

(*ii*) The location of the organisation ;

(*iii*) The facilities, equipment or staff that could affect the ATO certification or ratings ;

(*iv*) Any ratings held by the ATO, whether granted by the Authority or held through an ATO certification issued by another contracting State ;

(*v*) Additional locations of the organisation ;

(*vi*) Items in the Training and Procedures Manual, including the syllabi and curricula ;

(vii) The accountable manager ; or

(viii) The list of management personnel identified as described in the Training and Procedures Manual.

(*b*) The Authority will amend the ATO certificate if the ATO notifies the Authority of a change in—

(*i*) Location or facilities or equipment ;

(*ii*) Additional locations of the organisation ;

(*iii*) Rating, including deletions ;

(*iv*) Items in the Training and Procedures Manual, including the syllabi and curricula ;

(*v*) Name of the organisation with same ownership ; or

(*vi*) Ownership.

(*c*) The Authority may amend the ATO certificate if the ATO notifies the Authority of a change in—

(*i*) The accountable manager ;

(*ii*) The list of management personnel identified as described in the Training and Procedures Manual ; or.

(*iii*) Items in the Training and Procedures Manual, including the syllabi and curricula.

(*d*) When the Authority issues an amendment to an ATO certificate because of new ownership of the ATO, the Authority will assign a new certificate number to the amended ATO certificate.

(*e*) The Authority may—

(i) Prescribe, in writing, the conditions under which the ATO may continue to operate during any period of implementation of the changes noted in subparagraph (*a*) ; and

(ii) Hold the ATO certificate in abeyance if the Authority determines that approval of the ATO certificate should be delayed; the Authority will notify the ATO certificate holder, in writing, of the reasons for any such delay.

(*f*) If changes are made by the ATO to the items listed in subparagraph *(a)* without notification to the Authority and amendment of the ATO certificate by the Authority, the ATO certificate may be suspended, or revoked, by the Authority.

Location of the ATO.

3.2.1.12.—*(a)* Principal place of business. An applicant for, or holder of, a certificated ATO under this Part shall establish and maintain a principal place of business office that is physically located at the address shown on its certificate.

(*b*) Satellite ATOs. The holder of an ATO certificate may conduct training in accordance with a training programme approved by the Authority at a satellite ATO if :

(i) The facilities, equipment, personnel and course content of the satellite ATO meet the applicable requirements ; and

(ii) The instructors at the satellite ATO are under the direct supervision of management personnel of the principal ATO ; and

(iii) The Authority has issued training specifications to the ATO that reflect the name and address of the satellite ATO and the approved courses offered at the satellite ATO.

(*c*) Foreign locations of ATOs. An ATO or a satellite of an ATO approved by the Authority may be located in a country outside Nigeria and is subject to all the applicable requirements of this Part.

Facilities, Equipment and Material —General Requirements.

3.2.1.13.—(*a*) The facilities and working environment of the ATO shall be appropriate for the task to be performed and acceptable to the Authority.

(b) The ATO shall have the necessary information, technical data, equipment, training devices and material to conduct the courses for which it is approved.

(c) Any training devices used by the ATO shall be qualified according to requirements established by the Authority and their use shall be approved by the Authority to ensure they are appropriate to the task.

(d) A certificate holder shall not make a substantial change in facilities, equipment or material that have been approved for a particular training programme, unless that change is approved in advance by the Authority.

(e) The facility that is the ATO principal place of business—

(i) Shall not be shared with, or used by, another ATO, and

(ii) Shall be adequate to maintain the files and records required to operate the business of the ATO.

Personnel—General Requirements.

3.2.1.14.—*(a)* The ATO shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organisation.

(b) The ATO shall employ the necessary personnel to plan, perform and supervise the training to be conducted.

(c) The competence of instructional personnel shall be in accordance with procedures and to a level acceptable to the Authority.

(d) The ATO shall ensure that all instructional personnel receive initial and recurrent training appropriate to their assigned tasks and responsibilities. The training programme established by the ATO shall include training in knowledge and skills related to human performance.

(1) The training programme for ATO employees shall be contained in the ATO Training and Procedures Manual.

Recordkeeping – General Requirements.

3.2.1.15.—(*a*) Student records.

(i) The ATO shall retain detailed student records to show that all requirements of the training course have been met as approved by the Authority.

(ii) These records shall be kept for a minimum period of two years after completion of the training.

(b) ATO staff records.

(i) The ATO shall maintain a system for recording the qualifications and training of instructional and examining staff, where appropriate.

(ii) These records shall be kept for a minimum period of two years after the instructor or examiner ceases to perform a function for the ATO.

ATO Approved for Testing.

3.2.1.16—*(a)* The Authority may approve an ATO to conduct the testing required for the issuance of a licence or rating.

(b) The ATO personnel authorised to conduct the testing shall be approved by the Authority.

(a) The ATO shall establish a quality system, acceptable to the Authority, to ensure that training and instructional practices comply with all relevant requirements.

(b) The ATO quality system shall be established in accordance with the instruction and information contained in IS: 3.2.1.17.

3.2.1.18—(a) The ATO shall provide a training and procedures manual, approved by the Authority, for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information : ATO Training and Procedures Manual – General Requirements.

(i) A general description of the scope of training authorised under the ATO's terms of approval;

(ii) The content of the training programmes offered including the courseware and equipment to be used;

(iii) A description of the organisation's quality assurance system;

(iv) A description of the organisation's facilities;

(v) The name, duties and qualification of the person designated as the accountable manager;

(vi) A description of the duties and qualification of the personnel responsible for planning, performing and supervising the training;

(vii) A description of the procedures used to establish and maintain the competence of instructional personnel;

(viii) A description of the method used for the completion and retention of the training record;

(ix) A description, when applicable, of additional training needed to comply with an operator's procedures and requirements; and

(x) A description of the selection, role and duties of authorised persons approved to conduct testing for a licence or rating, when an ATO has been approved by the Authority to conduct such testing.

(b) The ATO shall ensure that the training and procedures manual is amended as necessary to keep the information contained therein up to date.

(c) The ATO shall promptly furnish copies of all amendments to the training and procedures manual to the Authority and other personnel and organisations to which the manual has been issued.

3.2.1.19—(*a*) A person who holds a flight instructor certificate shall not conduct more than 8 hours of flight training in any 24-consecutive-hour period. Duty Period Limitations.

(b) A flight simulation training device instructor, excluding briefing and debriefing, shall not conduct more than 8 hours of instruction in any 24-consecutive-hour period.

(c) A student in a certificated aircraft maintenance engineer school may not be required to attend classes of instruction more than 8 hours in any day or more than 6 days or 40 hours in any 7-day period.

3.2.1.20—(a) An ATO shall implement a safety management system acceptable to the Authority as outlined in Nig. CARs Part 20. ATO Safety Management System.

Outsourcing To Third-Party Providers.

3.2.1.21.—(*a*) The ATO may outsource courseware, facilities and equipment and instructional personnel to a third-party, provided that the ATO has been approved by the Authority —

(i) For the training to be conducted, and

(ii) To contract with third-party to be used.

(b) The ATO shall be accountable for the quality of third-party providers, including suitability of courseware, facilities and equipment and instructional personnel, used to meet the ATO approved programmes.

3.3. ADDITIONAL REQUIREMENTS FOR INSTRUCTION FOR FLIGHT CREW LICENCES

General.

3.3.1.—(*a*) In addition to the requirements of Subpart 3.2, this subpart prescribes additional requirements for ATOs teaching flight crew curricula.

3.3.2. CURRICULUM APPROVAL.

Flight Crew Training Courses.

3.3.2.1—*(a)* The Authority may approve, as provided in the training specifications, the ATO to conduct the following courses of instruction to an applicant for, or holder of an ATO certificate, provided the applicant meets the requirements of Part 2 and Part 3 :

(i) Private pilot licence course ;

(ii) Commercial pilot licence course ;

(iii) Instrument rating course ;

(iv) Commercial pilot licence/Instrument rating-multi-engine/CRM integrated course ;

(v) Multi-crew pilot licence course ;

(vi) Airline transport pilot licence course ;

(vii) Flight engineer licence course ;

(viii) Flight licence course ;

(ix) Class rating course ;

(x) Type rating course ;

(xi) Crew resource management course ;

(xii) Flight instructor course ;

(xiii) Instructor course for additional type or class ratings ;

(xiv) Instructor course for flight simulation training;

(xv) Refresher courses; and

(xvi) Other courses as the Authority may approve.

Training PROGRAM Approval – Qualification Based and Alternate Means of Compliance

3.3.2.2—(*a*) The applicant for, or holder of, an ATO certificate shall apply to the Authority for approval for each program to be offered or amended.

(i) The applicant or ATO shall submit two copies of the training course or amendment to the Authority as part of the application when applying for new or amended training program approval.

(ii) The applicant or ATO shall submit the application to the Authority at least 30 days before any training under the program, is scheduled to begin.

(*b*) Except as provided in 3.3.2.3 of this section, each training program for which approval is requested must meet the minimum ground and flight training time requirements specified in Nig. CARs Part 2 for the licence, rating or authorisation sought.

(c) Each training program for which approval is requested shall contain :

(i) A description of each room used for ground training, including the room size and the maximum number of students that may be trained in the room at one time ;

(ii) A description of each type of audiovisual aid, projector, tape recorder, mockup, chart, aircraft component, and other special training aids used for ground training ;

(iii) A description of each flight simulation training device used for training ;

(iv) A listing of the aerodromes at which training flights originate and a description of the facilities, including pilot briefing areas that are available for use by the ATO's students and personnel at each of those aerodromes ;

(v) A description of the type of aircraft including any special equipment used for each phase of training ;

(vi) The minimum qualifications and ratings for each instructor assigned to ground or flight training ; and

(vii) A training syllabus that includes the following information—

(1) The prerequisites for enrolling in the ground and flight portion of the program that include the pilot certificate and rating (if required by this part), training, pilot experience, and pilot knowledge ;

(2) A detailed description of each lesson, including the lesson's objectives, standards, and planned time for completion ;

(3) A description of what the program is expected to accomplish with regard to student learning ;

(4) The expected accomplishments and the standards for each stage of training ; and

(5) A description of the checks and tests to be used to measure a student's accomplishments for each stage of training.

Training Program Approval—Alternative Means of Compliance and Competency Based Training and Assessment

3.3.2.3—(*a*) An ATO may request and receive initial approval for a period of not more than 24 calendar months for any training program under this part that does not meet the minimum hours for a licence prescribed by Nig. CARs Part 2, provided that:

(i) The ATO shows that the training will provide an equivalent level of competency at least equal to the minimum experience requirements for personnel not receiving such training, and

(ii) The following provisions are met:

(1) The ATO holds an ATO certificate issued under this part and has held that certificate for a period of at least 24 consecutive calendar months preceding the month of the request;

(2) In addition to the information required by 3.3.2.2(c) of this section, the training program specifies planned ground and flight training time requirements for the program ;

(3) The school does not request the training program to be approved for examining authority, nor may that school hold examining authority for that program ; and

(4) The knowledge test and/or skill test for the program is to be given by—

(a) An Authority inspector; or

(b) A designated examiner who is not an employee of the school.

(b) An ATO may request and receive final approval for any training program under this part that does not meet the minimum hours for a licence prescribed by Nig. CARs Part 2, provided the following conditions are met :

(i) The ATO has held initial approval for that training program for at least 24 calendar months.

(ii) The ATO has—

(1) Trained at least 10 students in that training program within the preceding 24 calendar months and recommended those students for a pilot, flight instructor, or ground instructor certificate or rating; and

(2) At least 80 percent of those students passed the skill or knowledge test, as appropriate, on the first attempt, and that test was given by—

(a) An Authority inspector; or

(b) A designated examiner who is not an employee of the school.

(iii) In addition to the information required by 3.3.2.2 (*c*) of this section, the training program specifies planned ground and flight training time requirements for the program.

(iv) The ATO does not request that the training program be approved for examining authority nor may that school hold examining authority for that program.

3.3.3—*(a)* The applicant for an ATO certificate or a current certificate holder teaching flight crew curricula shall have on the staff the following— Personnel

(i) An Accountable manager ;

(ii) A Quality Manager ;

(iii) A Head of Training ;

(iv) A Chief Flight Instructor, as applicable ;

(v) A Chief Ground Instructor, as applicable ;

(vi) Safety Manager as applicable ;

(vii) Maintenance Manager as applicable ;

(viii) An adequate number of ground and flight instructors relevant to the courses provided as determined by the Authority ; and

(ix) Other management personnel appropriate to the size and complexity of the training operation, as determined by the Authority.

(b) Each instructor to be used for training shall have received the appropriate training and hold the appropriate licences and/or ratings as required by Part 2.

(c) The duties and qualifications of the personnel listed in this paragraph are contained in IS: 3.3.3.

(d) The Authority may approve a request to combine the positions of Accountable Manager, Quality Manager, Head of Training, Chief Flight Instructor and / or Chief Ground Instructor. An approval previously granted by the Authority to combine the positions of Accountable Manager, Quality Manager, Head of Training, Chief Flight Instructor and / or Chief Ground Instructor may be withdrawn at any time, upon a determination by the authority that the combined positions are no longer appropriate to the size and complexity of the Training operation.

3.3.4. Facilities Required For Flight Crew Training

3.3.4.1—*(a)* An applicant for, and holder of an ATO certificate teaching flight crew curricula shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows : Training Facilities.

TRAINING FACILITIES

(*i*) Flight operations facilities :

(1) An operations room ;

(2) A flight planning room ;

(3) Adequate briefing rooms ;

(4) Offices for the instructors.

(ii) Knowledge instruction facilities, including—

(1) Classroom accommodation ;

(2) Suitable demonstration equipment ;

(3) An RT training and testing facility ;

(4) A library ;

(5) Offices for instructors.

Training Aircraft.

3.3.4.2—*(a)* An applicant for, or holder of, an ATO certificate must ensure that each aircraft used for flight instruction and solo flights meets the following requirements :

(i) Except for flight instruction and solo flights in a curriculum for agricultural aircraft operations, external load operations, and similar aerial work operations, the aircraft must have a Nigerian standard airworthiness certificate or a foreign equivalent of a Nigerian standard airworthiness certificate acceptable to the Authority.

(ii) The aircraft shall be maintained and inspected in accordance with Part 8: 8.3 of this Regulation and an approved maintenance programme.

(iii) The aircraft must be equipped as provided in the training specifications for the approved course for which it is used.

(iv) Except as provided in (5) below, each aircraft used in flight training must have at least two pilot stations with engine-power controls that can be easily reached and operated in a normal manner from both pilot stations ;

(v) Airplanes with controls such as nose-wheel steering, switches, fuel selectors, and engine air flow controls that are not easily reached and operated in a conventional manner by both pilots may be used for flight instruction if the certificate holder determines that the flight instruction can be conducted in a safe manner considering the location of controls and their non-conventional operation, or both.

(vi) Each aircraft used in a course involving instrument flight rule en route operations and instrument approaches shall be equipped and maintained for instrument flight rule operations. For maneuvering of an aircraft by reference to instruments, the aircraft may be equipped as provided in the approved course of training.

3.3.4.3—*(a)* An applicant for, or holder of an ATO certificate, approved to use flight simulation training devices, shall show that each flight simulation training device used for training and checking will be or is specifically qualified and approved by the Authority for : Flight Simulation Training Devices.

(i) Each manoeuvre and procedures for the make, model and series of aircraft, set of aircraft, or aircraft type simulated, as applicable ; and

(ii) Each training programme or training course in which the flight simulation training device is used.

(b) Each qualified and approved flight simulation training devices used by an ATO shall :

(i) Be maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for their qualification ;

(ii) Be modified to confirm/comform with any modification to the aircraft being simulated if the modification results in changes to performance, functions, or other characteristics required for qualification ;

(iii) Be given a functional preflight check each day before being used ; and

(iv) Have a discrepancy log in which the instructor or evaluator, at the end of each training session, enters each discrepancy.

3.3.4.4.—(*a*) Each applicant for, and holder of, an ATO certificate shall show that it has continuous use of each aerodrome and site (for helicopter training) at which training flights originate, and that the aerodrome has an adequate runway and the necessary equipment. Aerodromes and Sites.

(b) The base aerodrome, and any alternative base aerodrome, at which flying training is being conducted shall have at one runway or take-off area that allows training aircraft to make a normal take-off or landing at the maximum certificated take-off or maximum certificated landing mass, under the following conditions :

(i) Under calm wind (not more than four knots) conditions ;

(ii) At temperatures equal to the mean high temperature for the hottest month of the year in the operating area ;

(iii) If applicable, with the powerplant operation, and landing gear and flap operation recommended by the manufacturer ; and

(iv) In the case of a takeoff—

(1) Clearing all obstacles in the take-off flight path by at least 50 feet ;

(2) with a smooth transition from lift-off to the best rate of climb speed without exceptional piloting skills or techniques ;

(c) Each airport shall have a wind direction indicator that is visible at ground level from the ends of each runway ;

(i) Have adequate runway electrical lighting if used for night training ; and

(ii) Have a traffic direction indicator when :

(1) the airport does not have an operating control tower ; and

(2) traffic and wind advisories are not available.

(d) Except as specified in item (*e*) below, each airport used for night training flights shall have permanent runway lights.

(e) An airport or seaplane base used for night training flights in seaplanes may be approved by the Authority to use adequate, non-permanent lighting or shoreline lighting.

(f) Sites shall be available for :

(i) confined area operation training ;

(ii) simulated engine off autorotation ;

(iii) sloping ground operation.

3.3.5 ADDITIONAL, SPECIFIC OPERATING RULES FOR FLIGHT CREW TRAINING

Training and Procedures Manual.

3.3.5.1—*(a)* Each applicant for, or holder of an ATO certificate shall prepare and maintain a Training Manual and a Procedures Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements.

(b) The Training Manual and Procedures Manual may be combined.

(c) The ATO shall ensure that the Training Manual and the Procedures Manual are amended as necessary to keep the information contained therein up to date.

(d) Copies of all amendments to the Training Manual and the Procedures Manual shall be furnished promptly by the ATO to all organisations or persons to whom the manual has been issued.

(e) See IS 3.3.5.1 for detailed requirements for the Training Manual and the Procedures Manual and format for each manual.

Record Keeping for Flight Crew Training,

3.3.5.2—*(a)* Students. An ATO that is approved to conduct flight crew training shall maintain a record for each trainee that contains—

(i) The name of the trainee ;

(ii) A copy of the trainee's airman certificate, if any, and any medical certificate ;

(iii) The name of the course and the make and model of flight training equipment used ;

(iv) The trainee's prerequisite experience and course time completed ;

(v) The trainee's performance on each lesson and the name of the instructor providing instruction ;

(vi) The date and result of each end-of-course skill test and the name of the examiner conducting the test ; and

(vii) The number of hours of additional training that was accomplished after any unsatisfactory skill test.

(b) ATO staff. An ATO that is approved to conduct flight crew training shall maintain a record for each instructor or evaluator approved to instruct a course approval in accordance with this subpart, that indicates the instructor or evaluator has complied with all applicable instructor requirements of these Regulations.

(c) Record retention. An ATO shall keep all records for a minimum period of two years.

(i) For students, from the date of completion of training, testing or checking ;

(ii) For ATO staff, from the date of the last employment.

(d) The ATO shall make the records available to the Authority upon request and at a reasonable time and shall keep the records –

(i) For students, at the ATO or satellite ATO where the training, testing, or checking occurred, and

(ii) For ATO staff, at the ATO or satellite ATO where the person is employed.

(e) The ATO shall provide to a trainee, upon request, and at a reasonable time, a copy of his or her training records.

3.3.5.3.—*(a)* An ATO shall issue a graduation certificate to each student who completes its approved course of training. Graduation Certificate.

(b) The graduation certificate shall be issued to the student upon completion of the course of training and contain at least the following information :

(i) The name and certificate number of the ATO ;

(ii) The name of the graduate who whom it was issued ;

(iii) The course of training for which it was issued ;

(iv) The date of graduation ;

(v) A statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages ;

(vi) A certification of the information contained on the graduation certificate by the chief instructor for that course of training ; and a statement showing the cross-country training that the student received in the course of training.

Examining Authority for ATO's Teaching Flight Crew Curriculums.

3.3.5.4—(a) An ATO shall meet the following prerequisites to receive initial approval for examining authority :

(i) The ATO shall complete the application for examining authority on a form and in a manner prescribed by the Authority ;

(ii) The ATO shall hold an ATO certificate and rating issued under this Part ;

(iii) The ATO should have held the rating in which examining authority is sought for at least 24 consecutive calendar months preceding the month of application for examining authority ;

(iv) The training course for which examining authority is requested may not be a course that is approved without meeting the minimum ground and flight training time requirements of this part ; and

(v) Within 24 calendar months before the date of application for examining authority, at least 90 percent of the students in the ATO must have passed the required skill or knowledge test, or any combination thereof, for the licence or rating for which examining authority is sought, on the first attempt, and that test was given by—

(1) An Authority inspector ; or

(2) A designated examiner who is not an employee of the ATO.

(b) The examining authority of the ATO is valid for 24 months, unless suspended or revoked by the Authority, and may be renewed upon request to the Authority by the ATO.

(c) An ATO that holds examining authority may recommend a person who graduated from its course for the appropriate knowledge or skill test.

(d) The ATO that holds examining authority will administer the tests or checks as required by Nig. CARs Parts 2 or 8, as appropriate to the licence or rating sought.

(e) A pilot school that holds examining authority shall maintain—

(i) A record of all temporary airman licences or ratings it issues, which consist of the following information in chronological order :

(1) The date the temporary airman licence was issued ;

(2) The student to whom the temporary airman certificate was issued, and that student's permanent mailing address and telephone number ;

(3) The training course from which the student graduated ;

(4) The name of person who conducted the knowledge or practical test ;

(5) The type of temporary airman licence or rating issued to the student ; and

(6) The date the student's airman application file was sent to the Authority for processing for a permanent airman licence.

(f) A copy of the record containing each student's graduation certificate, airman application, temporary airman licence, superseded airman licence (if applicable), and knowledge test or skill test results; and

(g) Retain these records for 2 years and make them available to the Authority upon request. These records must be surrendered to the Authority when the ATO ceases to have examining authority.

Student Transfer of Credit Between ATO's Teaching a Flight Crew Curriculum.

3.3.5.5—*(a)* A person who transfers from one ATO to another ATO may receive credit for that previous flight crew training, provided the following requirements are met :

(i) The maximum credited training time does not exceed one-half of the receiving ATO's curriculum requirements ;

(ii) The person completes a knowledge and proficiency test conducted by the receiving ATO for the purpose of determining the amount of experience and knowledge to be credited ;

(iii) The receiving ATO determines, based on the person's performance on the knowledge and proficiency test required by paragraph (a)(2) of this section, the amount of credit to be awarded, and records that credit in the person's training record ;

(iv) The person who requests credit for previous experience and knowledge obtained the experience and knowledge from another ATO approved training course ; and

(v) The receiving ATO retains a copy of the person's training record from the previous ATO.

Inspections of the ATO Teaching Flight Crew Curricula.

3.3.5.6—(*a*) Each ATO shall allow the Authority to inspect the ATO facilities, equipment and records at any reasonable time and in any reasonable place in order to determine compliance with these Regulations and the ATO's certificate and training specifications.

3.4 Additional Requirements for Instruction for Maintenance Licences and Training.

General.

3.4.1—(*a*) In addition to the requirements of Subpart 3.2, this subpart prescribes additional requirements for ATO's teaching maintenance curricula.

3.4.2 CURRICULUM APPROVAL

AME Training Courses.

3.4.2.1—(*a*) The Authority may approve, as provided in the training specifications, the ATO to conduct the following courses of instruction to an applicant for, or the holder of an ATO certificate, provided the applicant meets the requirements of Part 2 and Part 3 of these Regulations :

(i) Aircraft Maintenance Engineer licence course ;

(ii) Airframe rating course ;

(iii) Powerplant rating course ;

(iv) Airframe and Powerplant combined ratings course ;

(v) Avionics rating course ; and

(vi) Other courses as the Authority may approve.

Training Course Approval—Alternative Means of Compliance.

3.4.2.2—*(a)* An applicant for an ATO certificate shall apply to the Authority for approval for each course to be offered or amended.

(i) The applicant or ATO shall submit a copy of the training course or amendment to the Authority as part of the application when applying for new or amended training course approval.

(ii) The applicant or ATO shall submit the application to the Authority at least 30 days before any training under the course is scheduled to begin.

(b) Except as provided in 3.4.2.3 of this section, each training course for which approval is requested shall meet the minimum training time requirements specified in Nig. CARs Part 2 for the licence, rating or authorisation sought.

(c) Each training course for which approval is requested shall contain :

(i) A description of each room used for training, including the room size and the maximum number of students that may be trained in the room at one time ;

(ii) A description of each type of audiovisual aid, projector, tape recorder, mockup, chart, aircraft component, and other special training aids used for training ;

(iii) A description of the minimum equipment to be used in each course ;

(iv) The minimum qualifications and ratings for each instructor assigned to training, including initial and continuing training ; and

(v) A training syllabus that includes the following information—

(1) The prerequisites for enrolling in the course ;

(2) A detailed description of each lesson, including the lesson's objectives, standards, and planned time for completion ;

(3) The subjects and items to be covered and the level of proficiency to meet ;

(4) For each subject, the proportions of theory and other instruction to be given ;

(5) A description of what the course is expected to accomplish with regard to student learning,

(6) The expected accomplishments and the standards for each stage of training, including the required practical projects to be completed ; and

(7) A description of the checks and tests to be used to measure a student's accomplishments for each stage of training.

Training Course Approval—Alternative Means Of Compliance And Competency Based Training And Assessment.

3.4.2.3—*(a)* An ATO may request and receive initial approval for a period of not more than 24 calendar months for any training course under this part that does not meet the minimum hours for a licence prescribed by Nig. CARs Part 2, provided that :

(i) The ATO shows that the training will provide an equivalent level of competency at least equal to the minimum experience requirements for personnel not receiving such training, and

(ii) The following provisions are met :

(1) The ATO holds an ATO certificate issued under this part and has held that certificate for a period of at least 24 consecutive calendar months preceding the month of the request ;

(2) In addition to the information required by 3.4.2.2(*c*) of this section, the training course specifies planned training time requirements for the course ;

(3) The school does not request the training course to be approved for examining authority, nor may that school hold examining authority for that course ; and

(4) The knowledge test and/or skill test for the course is to be given by—

(a) An Authority inspector ; or

(b) A designated examiner who is not an employee of the school.

(b) An ATO may request and receive final approval for any training course under this part that does not meet the minimum hours for a licence prescribed by Nig. CARs Part 2, provided the following conditions are met:

(i) The ATO has held initial approval for that training course for at least 24 calendar months.

(ii) The ATO has—

(1) Trained at least 10 students in that training course within the preceding 24 calendar months and recommended those students for an AME licence or rating ; and

(2) At least 80 percent of those students passed the skill or knowledge test, as appropriate, on the first attempt, and that test was given by—

(a) An Authority inspector ; or

(b) A designated examiner who is not an employee of the school.

(iii) In addition to the information required by 3.4.2.2 (*c*) of this section, the training course specifies planned theoretical knowledge and practical training time requirements for the course.

(iv) The ATO does not request that the training course be approved for examining authority nor may that school hold examining authority for that course.

Personnel.

3.4.3—*(a)* The applicant for an ATO certificate or current certificate holder teaching maintenance curricula shall have on the staff the following —

(i) An Accountable Manager ;

(ii) A Quality Manager ;

(iii) A Head of Training ;

(iv) Maintenance Manager as applicable ;

(v) Safety Manager as applicable ; and.

(vi) Other management personnel appropriate to the size and complexity of the training operation as determined by the Authority.

(b) An adequate number of instructors relevant to the courses provided as determined by the Authority.

(c) Each instructor to be used for training shall have received the appropriate training and hold the appropriate licence and/or rating as required by Part 2.

(d) The Authority may approve a request to combine the positions of Accountable Manager, Quality Manager and / or Head of Training. An approval previously granted by the Authority to combine the positions of Accountable Manager, Quality Manager and / or Head of Training may be withdrawn at any time, upon a determination by the authority that the combined positions are no longer appropriate to the size and complexity of the Training operation.

(e) The duties and qualifications of training and instruction staff are as follows :

(i) Head of Training. The Head of Training shall have overall responsibility for ensuring satisfactory integration of theoretical knowledge instruction and practical training and for supervising the progress of individual students. The Head of Training shall have had extensive experience in training as an instructor for AME licensing and possess a sound managerial capability.

(ii) Instructors.

(1) Each ATO shall provide the number of instructors holding appropriate licences and ratings, issued under Part 2, that the Authority determines is necessary to provide adequate instruction and supervision of the students.

(2) An ATO may provide specialised instructors, who are not licensed but who are approved in accordance with Part 2, to teach mathematics, physics, basic electricity, basic hydraulics, drawing, and similar subjects.

(iii) Quality Manager. See IS 3.3.3 (*b*) for duties and qualifications of a Quality Manager

Facilities Required for Mechanic Training.

3.4.4.—*(a)* An applicant for, and holder of, an ATO certificate shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows :

(i) An enclosed classroom.

(ii) Suitable facilities arranged to assure proper separation from the working space, for parts, tools, materials and similar articles.

(iii) Suitable area for application of finishing materials, including paint spraying.

(iv) Suitable areas equipped with washtank and degreasing equipment with air pressure or other adequate cleaning equipment.

(v) Suitable facilities for running engines.

(vi) Suitable area with adequate equipment, including benches, tables, and test equipment, to disassemble, service and inspect :

(1) Ignition systems, electrical equipment and appliances ;

(2) Carburettors and fuel systems ; and

(3) Hydraulic and vacuum systems for aircraft, aircraft engines, and their appliances.

(vii) Suitable space with adequate equipment, including tables, benches, stands and jacks for disassembling, inspecting and rigging aircraft.

(viii) Suitable space with adequate equipment for disassembling, inspecting, assembling, troubleshooting and timing engines.

(b) An applicant for, or holder of an ATO certificate with approved AME courses shall have and maintain the following instructional equipment as is appropriate to the rating sought :

(i) Various kinds of airframe structures, airframe systems and components, powerplants and powerplant system and components (including propellers) of a quantity and type suitable to complete the practical projects required by its approved training programme ;

(ii) At least one aircraft of a type acceptable to the Authority ;

(c) An applicant for, or holder of an ATO certificate with an AME rating shall have airframes, powerplants, propellers, appliances and components thereof, to be used for instruction and from which students will gain practical working experience and shall insure that the airframes, powerplants, propellers, appliances and components thereof be sufficiently diversified as to show the different methods of construction, assembly, inspection and operation when installed in an aircraft for use.

(d) An applicant for an ATO certificate with an AME rating, or an applicant seeking an additional AME rating, shall have at least the facilities, equipment and materials appropriate to the rating sought.

(e) An applicant for, or holder of, an ATO certificate with an AME rating shall maintain, on the premises and under the full control of the ATO, an adequate supply of material, special tools and shop equipment used in constructing and maintaining aircraft as is appropriate to the approved training programme of the ATO, in order to assure that each student will be properly instructed.

(f) A certificate holder may not make a substantial change in facilities, equipment or material that have been approved for a particular training programme, unless that change is approved by the Authority in advance.

3.4.5. ADDITIONAL, SPECIFIC OPERATING RULES FOR MAINTENANCE TRAINING

Training and Procedures Manual

3.4.5.1.—*(a)* Each applicant for, or holder of an ATO certificate shall prepare and maintain a Training Manual and a Procedures Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements.

(b) The Training Manual and Procedures Manual may be combined.

(c) The ATO shall ensure that the Training Manual and the Procedures Manual is amended as necessary to keep the information contained therein up to date.

(d) Copies of all amendments to the Training Manual and the Procedures Manual shall be furnished promptly by the ATO to all organisations or persons to whom the manual has been issued.

(e) See IS: 3.4.5.1 for detailed requirements for the Training Manual and the Procedures Manual and the format for each manual.

Record keeping.

3.4.5.2.—*(a)* Students. An ATO that is approved to conduct maintenance training shall maintain a record for each trainee that contains—

(i) The name of the trainee ;

(ii) A copy of the trainee's airman certificate, if any ;

(iii) The name of the course and the instruction credited ;

(iv) The trainee's prerequisite experience and course time completed ;

(v) The trainee's performance on each lesson and the name of the instructor providing instruction ;

(vi) The date and result of each end-of-course test and the name of the examiner conducting the test ; and

(vii) The number of hours of additional training that was accomplished after any unsatisfactory test.

(viii) A current progress chart or individual progress record for each student, showing the practical projects or laboratory work completed, or to be completed, in each subject.

(b) ATO staff. An ATO that is approved to conduct maintenance training shall maintain a record for each instructor or evaluator approved to instruct a course approval in accordance with this subpart, that indicates the instructor or evaluator has complied with all applicable instructor requirements of these Regulations.

(c) Record retention. An ATO shall keep all records for a minimum period of two years.

(i) For students, from the date of completion of training or testing ;

(ii) For ATO staff, from the date of the last employment.

(d) The ATO shall make the records available to the Authority upon request and at a reasonable time and shall keep the records—

(i) For students, at the ATO or satellite ATO where the training, testing, or checking occurred, and

(ii) For ATO staff, at the ATO or satellite ATO where the person is employed.

(e) The ATO shall provide to a trainee, upon request, and at a reasonable time, a copy of his or her training records.

3.4.5.3—*(a)* An ATO shall issue a graduation certificate to each student who completes its approved course of training. Graduation Certificate.

(b) The graduation certificate shall be issued to the student upon completion of the course of training and contain at least the following information;

(i) The name and certificate number of the ATO;

(ii) The name of the graduate to whom it was issued;

(iii) The course of training for which it was issued;

(iv) The date of graduation;

(v) A statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages;

(vi) A certification of the information contained on the graduation certificate by the Head of Training for that course of training.

Examining Authority for ATO's Teaching Maintenance Curricula.

3.4.5.4.—*(a)* An ATO shall meet the following prerequisites to receive initial approval for examining authority :

(i) The ATO must complete the application for examining authority on a form and in a manner prescribed by the Authority ;

(ii) The ATO must hold an ATO certificate and rating issued under this Part ;

(iii) The ATO must have held the rating in which examining authority is sought for at least 24 consecutive calendar months preceding the month of application for examining authority ;

(iv) Within 24 calendar months before the date of application for examining authority, at least 90 percent of the students in the ATO must have passed the required skill or knowledge test, or any combination thereof, for the licence or rating for which examining authority is sought, on the first attempt, and that test was given by—

(1) An Authority inspector ; or

(2) A designated examiner who is not an employee of the ATO.

(b) The examining authority of the ATO is valid for 24 months, unless suspended or revoked by the Authority, and may be renewed upon request to the Authority by the ATO.

(c) An ATO that holds examining authority may recommend a person who graduated from its course for the appropriate knowledge or skill test.

(d) The ATO that holds examining authority will administer the tests as required by Nig. CARs Part 2 as appropriate to the licence or rating sought.

(e) An ATO that holds examining authority may conduct knowledge and skill tests on a progressive schedule if approved by the Authority. This may be necessary due to the length and complexity of an inclusive maintenance training programme.

(f) An ATO that holds examining authority must maintain—

(i) A record of all temporary airman licences or ratings it issues, which consist of the following information in chronological order :

(1) The date the temporary airman licence was issued ;

(2) The student to whom the temporary airman certificate was issued, and that student's permanent mailing address and telephone number ;

(3) The training course from which the student graduated ;

(4) The name of person who conducted the knowledge or skill test ;

(5) The type of temporary airman licence or rating issued to the student ; and

(6) The date the student's airman application file was sent to the Authority for processing for a permanent airman licence.

(ii) A copy of the record containing each student's graduation certificate, airman application, temporary airman licence, superseded airman licence (if applicable), and knowledge test or skill test results; and

(iii) Retain these records for 2 years and make them available to the Authority upon request. These records must be surrendered to the Authority when the ATO ceases to have examining authority.

Student Transfer of Credit Between ATO's Teaching a Maintenance Curriculum.

3.4.5.5.—*(a)* A person who transfers from one ATO to another ATO may receive credit for that previous maintenance training, provided the following requirements are met :

(i) The maximum credited training time does not exceed one-half of the receiving ATO's curriculum requirements for the licence or rating ;

(ii) The person completes a knowledge and practical test conducted by the receiving ATO for the purpose of determining the amount of experience and knowledge to be credited ;

(iii) The receiving ATO determines, based on the person's performance on the knowledge and practical test required by paragraph (a)(2) of this section, the amount of credit to be awarded, and records that credit in the person's training record ; and

(iv) The receiving ATO retains a copy of the person's training record from the previous ATO.

Inspections of the ATO Teaching Maintenance Curricula.

3.4.5.6.—(*a*) Each ATO shall allow the Authority to inspect the ATO facilities, equipment and records at any reasonable time and in any reasonable place in order to determine compliance with these regulations and the ATO's certificate and training specifications.

3.5. ADDITIONAL REQUIREMENTS FOR INSTRUCTION FOR OTHER LICENCES AND TRAINING

3.5.1.—(*a*) In addition to the requirements of Subpart 3.2, this subpart prescribes additional requirements for ATO's teaching curricula in the following areas :

(1) Air traffic controller licence course ; and

(2) Aeronautical station operator licence course ;

(3) Flight Dispatcher Licence course ;

(4) Cabin Crew Licence course ;

(5) ATSEP Licence course.

3.5.2. CURRICULUM APPROVAL

Training Courses.

3.5.2.1.—(*a*) The Authority may approve, as provided in the training specifications, the ATO to conduct the following courses of instruction, provided the applicant meets the requirements of Part 2 and Part 3 of these Regulations :

(1) Air traffic controller licence ; and

(2) Aeronautical station operator licence ;

(3) Flight Dispatcher Licence ;

(4) Cabin Crew Licence ;

(5) ATSEP Licence.

Training Program and Approval.

3.5.2.2.—*(a)* The Applicant For, Or The Holder Of, An Ato Certificate Shall Apply To The Authority For Training Program Approval.

(b) The applicant for, or the holder of, an ATO certificate shall develop a training program for each type of course offered that is designed to qualify its students to perform the duties of the personnel as in 3.5.1 (*a*) above for a particular license or ratings. This program shall include, based on the requirements in Part 2 of this Regulation :

(1) The curriculum and duration for each course ;

(2) The subjects and items to be covered and the level of proficiency to be met ;

(3) For each subject, the proportions of theory and other instruction to be given ; and

(4) The required practical projects to be completed ;

(5) A list of the mastery tests to be given by the ATO ;

(6) Minimum equipment required for each proposed course ;

(7) Minimum instructor qualifications for each proposed program ; and

(8) A program for initial training and continuing training of each instructor employed to instruct in a proposed course.

(c) The content and sequence of the training program shall be acceptable to the authority.

Personnel.

3.5.3.—*(a)* The applicant for an ATO certificate or current certificate holder teaching any of the curricula listed in 3.5.2.1 above shall have on the staff the following—

(1) An Accountable Manager ;

(2) A Quality Manager ;

(3) A Head of Training ;

(4) Other management personnel appropriate to the size and complexity of the training operation, as determined by the Authority ; and

(5) An adequate number of instructors for the courses provided, as determined by the Authority.

(b) The Authority may approve a request to combine the positions of Accountable Manager, Quality Manager, and/or Head of Training. An approval previously granted by the Authority to combine the positions of Accountable Manager, Quality Manager, and/or Head of Training may be withdrawn at any time upon a determination by the Authority that the combined positions are no longer appropriate to the size and complexity of the training operation.

(c) Each instructor to be used for training shall have received the appropriate training and hold the appropriate license and/or rating as required by Part 2 of these Regulations.

(d) The duties and qualifications of training and instruction staff are as follows :

(1) Head of Training. The Head of Training shall have overall responsibility for ensuring satisfactory integration of theoretical knowledge instruction and practical training and for supervising the progress of individual students. The Head of Training shall have had extensive experience in training as an instructor and possess a sound managerial capability.

(2) Instructors.

(i) Each ATO shall provide the number of instructors holding appropriate licenses and ratings, issued under Part 2 of these Regulations, that the Authority determines is necessary to provide adequate instruction and supervision of the students.

(ii) An ATO may provide specialised instructors, who are not licensed but who are approved in accordance with Part 2 of these Regulations, to teach specialised subjects as are applicable.

Facilities Required for Training.

3.5.4—*(a)* An applicant for, and holder of, an ATO certificate shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows:

(1) An operations room, as applicable ;

(2) A flight planning room, as applicable ;

(3) Adequate briefing rooms, as applicable ;

Knowledge instruction facilities, including—

(4) Classroom accommodation ;

(5) Suitable demonstration equipment ;

(6) An RT training and testing facility as applicable ;

(7) Training Console, as applicable ;

(8) A library ;

(9) Aircraft mockup, as applicable ;

(10) Offices for instructors ;

(11) Other equipment and materials that are required as determined by the Authority.

(b) A certificate holder may not make a substantial change in facilities, equipment or material that have been approved for a particular training program, unless that change is approved by the Authority in advance.

3.5.5. ADDITIONAL, SPECIFIC OPERATING RULES FOR TRAINING

3.5.5.1. In addition to the requirements of Subpart 3.2, this subpart prescribes additional requirements for ATO's teaching courses listed in 3.5.2.1 above.

Training and Procedures Manual.

3.5.5.2—*(a)* Each applicant for, or holder of an ATO certificate shall prepare and maintain a Training Manual and a Procedures Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements.

(b) The Training Manual and Procedures Manual may be combined.

(c) The ATO shall ensure that the Training Manual and the Procedures Manual is amended as necessary to keep the information contained therein up to date.

(d) Copies of all amendments to the Training Manual and the Procedures Manual shall be furnished promptly to all organisations or persons to whom the manual has been issued.

(e) See IS: 3.5.5.2 for detailed requirements for the Training Manual and the Procedures Manual and the format for each manual.

Record keeping.

3.5.5.3—(*a*) Students. An ATO that is approved to conduct training shall maintain a record for each trainee that contains—

(1) The name of the trainee ;

(2) A copy of the trainee's airman certificate, if any ;

(3) The name of the course and the instruction credited ;

(4) The trainee's pre-requisite experience and course time completed ;

(5) The trainee's performance on each lesson and the name of the instructor providing instruction ;

(6) The date and result of each end-of-course test and the name of the evaluator conducting the test ;

(7) The number of hours of additional training that was accomplished after any unsatisfactory test ; and

(8) A current progress chart or individual progress record for each student, showing the practical projects or laboratory work completed, or to be completed, in each subject.

(b) ATO staff. An ATO that is approved to conduct training shall maintain a record for each instructor or evaluator designated to instruct a course approval in accordance with this subpart, that indicates the instructor or evaluator has complied with all applicable instructor requirements of these Regulations.

(c) Record retention. An ATO shall keep all records for a minimum period of two years

(1) For students, from the date of completion of training or testing ; and

(2) For ATO staff, from the date of the last employment.

(d) The ATO shall make the records available to the Authority upon request and at a reasonable time and shall keep the records—

(1) For students, at the ATO or satellite ATO where the training, testing, or checking occurred ; and

(2) For ATO staff, at the ATO or satellite ATO where the person is employed.

(e) The ATO shall provide to a trainee, upon request, and at a reasonable time, a copy of his or her training records.

Graduation Certificate.

3.5.5.4—(*a*) An ATO shall issue a graduation certificate to each student who completes its approved course of training.

(b) The graduation certificate must be issued to the student upon completion of the course of training and contain at least the following information—

(1) The name and certificate number of the ATO ;

(2) The name of the graduate who whom it was issued ;

(3) The course of training for which it was issued ;

(4) The date of graduation ;

(5) A statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages ; and

(6) A certification of the information contained on the graduation certificate by the Head of Training for that course of training.

Student Transfer of Credit Between ATO's Teaching An Approved Curriculum.

3.5.5.5—(*a*) A person who transfers from one ATO to another ATO may receive credit for that previous training, provided the following requirements are met :

(1) The maximum credited training time does not exceed one-half of the receiving ATO's curriculum requirements for the licence or rating ;

(2) The person completes a knowledge and practical test conducted by the receiving ATO for the purpose of determining the amount of experience and knowledge to be credited ;

(3) The receiving ATO determines, based on the person's performance on the knowledge and practical test required by paragraph (a)(2) of this section, the amount of credit to be awarded, and records that credit in the person's training record ; and

(4) The receiving ATO retains a copy of the person's training record from the previous ATO.

Inspections of the Ato Teaching Approved Curricula.

3.5.5.6.—(*a*) Each ATO shall allow the Authority to inspect the ATO facilities, equipment and records at any reasonable time and in any reasonable place in order to determine compliance with these Regulations and the ATO's certificate and training specifications.

3.6. FLYING CLUB

Applicability.

3.6.1. This part prescribes requirements for operators of flying Clubs in Nigeria.

3.6.1.1. No person shall operate a flying club in Nigeria unless he/she holds an appropriate permit issued by the Authority. For the purpose of this part, an appropriate permit means a Permit for Aerial Aviation Service (PAAS) or a Permit for Non-Commercial Flight Operations (PNCF) issued by the Authority under Part 18 of these Regulations.

3.6.1.2. No person shall deploy an aircraft to be operated in a Flying Club unless the aircraft has a valid certificate of Airworthiness issued under Part 5 of these Regulations.

3.6.1.3. Knowledge and flight instructions carried out in such flying clubs shall meet the requirements of 2.3.4 and 2.3.4.2 of part 2 of these Regulations.

3.6.1.4. The training curricula shall meet the requirements of 3.3.2 of part 3 of these regulations.

3.6.1.5. No person shall carry out instructional duties in an aircraft operated by a Flying Club unless the persons holds a valid license or certificate of validation issued by the Authority under Part 2 of these Regulations.

3.6.1.6. All operators of Flying Club shall maintain appropriate insurance to cover their operation including liability for damage to property and third parties on ground.

3.6.1.7. Any person operating a Flying Club shall operate from aerodrome approved by the Authority including the associated airspace in accordance with Parts 12 & 14 of these Regulations.

3.6.1.8. All operators of Flying Club in Nigeria shall during the conduct of operations comply with all regulatory requirements relating to the Safety and security of flight operations including compliance with meteorological and air navigation services regulations in Nigeria.

3.6.1.9. All operators of Flying Club shall ensure that only qualified persons conduct maintenance on the aircraft and release aircraft to service after maintenance.

3.6.1.10. All operators of Flying Club shall develop standard operating procedures (SOP) acceptable to the Authority that will guide all members of the Club in their operation.

NIGERIA CIVIL AVIATION REGULATIONS

PART 3—IMPLEMENTING STANDARDS

IS. 3.2.1.3. APPROVED TRAINING ORGANISATION CERTIFICATE

NIGERIAN CIVIL AVIATION AUTHORITY

CERTIFICATE NO.

APPROVED TRAINING ORGANISATION CERTIFICATE

Pursuant to Section 30(4)(1) of the Civil Aviation Act 2006, Part 3 of the Nigeria Civil Aviation Regulations, the Nigeria Civil Aviation Authority hereby grant this Aviation Training Organisation Certificate Approval subject to the terms specified below :

BENEFICIARY :

REGISTERED ADDRESS :

TERMS OF APPROVAL :

Detailed Training Specifications and Limitations are as contained in the attached Scope of Approval.

This Certificate is not transferable and unless sooner surrendered, suspended or revoked. Shall continue in effect until otherwise stated.

This certificated is valid from : to

SIGNED this ………..…….. day of ……..................………., 20

Signed
DIRECTOR-GENERAL/CEO

Quality System.

IS 3.2.1.17—*(a)* In order to show compliance with 3.2.1.17, an ATO should establish its quality system in accordance with the instruction and information contained in the following paragraphs.

1.0. QUALITY POLICY AND STRATEGY

1.1. The ATO shall describe how the organisation formulates, deploys and reviews its policy and strategy and turns them into plans and actions applicable to all levels of the organisation. A formal written quality policy statement should be prepared, establishing a commitment by the accountable executive of the training organisation to achieving and maintaining the highest possible standards in quality. The quality policy should reflect the achievement and continued compliance with all applicable regulations and any additional standards that may be specified by the ATO.

1.2. The accountable executive of the training organisation will have the overall responsibility for the standard in quality including the frequency, format and structure of the internal management review and analysis activities and may delegate the responsibility for the tasks defined under paragraph 2 of this IS to a quality manager. Depending on the size and scope of the organisation and the requirements of the Authority, the accountable executive and quality manager may interact in different ways as illustrated in the organisational charts in diagrams 1 and 2.

2.0. QUALITY MANAGER

2.1. The primary role of the quality manager is to verify, by monitoring activities in the field of training, that the standards as established by the ATO and any additional requirements of the Authority are being carried out properly.

2.2. The quality manager shall be responsible for ensuring that the quality system is properly documented, implemented, maintained and continuously reviewed and improved.

2.3 The quality manager shall :

(*a*) report directly to the head of training (see Note) ; and

(*b*) have unencumbered access to all parts of the ATO.

Note : When the head of training is not the accountable executive, reporting mechanisms should be instituted to ensure that the accountable executive is aware of all issues impacting the quality of the training services being provided by the affected ATO.

2.4. The quality manager shall be responsible for ensuring that personnel training related to the quality system is conducted.

2.5. Under IS 3.3 of Part 3 of the Nigeria Civil Aviation Regulations, the minimum initial qualifications for a Quality Manager shall be : Qualification of a Quality Manager.

(*i*) A technically qualified person in at least one field of training to be conducted ;

(*ii*) At least three years experience in the training to be conducted ;

(*iii*) Must have successfully completed a training in quality management recognized by the Authority.

3. 0. QUALITY ASSURANCE

3.1. The term quality assurance is frequently misunderstood to mean the testing and checking of products and services. Organisations that only do checking and testing activities are merely applying 'quality control' measures, which are designed to catch product and service defects, but not necessarily prevent them. For example, an ATO that administers exams at the end of the training syllabus, only to discover that a large proportion of the students have failed to meet the required standard has only identified a deficiency in expected results. The implication would be that there could be a problem with the training programme, or the instructor, or even the student selection criteria. In this instance, the ATO has no idea what the real problem is or what to do about it. Quality control, by itself, provides limited value without the suite of complementary activities that comprise QA.

3.2. QA, on the other hand, attempts to improve and stabilise the training process to identify and avoid, or at least minimise, issues that lead to problems in the first place. It continuously verifies that standards are adhered to throughout the training process by introducing various checkpoints and controls. It further introduces a system of audits to ensure that documented policies, processes, and procedures are consistently followed. It is the 'assurance' part of quality management.

3.3. A QA plan for an ATO shall encompass well-designed and documented policies, processes and procedures for at least the following activities.

(*a*) Monitor training services and process controls ;

(*b*) Monitoring assessment and testing methods ;

(*c*) Monitor personnel qualifications and training ;

(*d*) Monitor training devices and equipment qualification, calibration and functionality, as applicable ;

(*e*) conduct internal and external audits ;

(*f*) develop, implement, and monitor corrective and preventive actions and associated reporting systems ; and (*g*) utilise appropriate statistical analysis to identify and respond appropriately to trends.

3.4 An effective QA plan will aid significantly in the ATO's compliance with requirements, its conformity with the standards and the adequacy of its training activities. To take the ATO's performance to a higher level requires a structure that ensures that the combined QA effort of the employees reaches its full potential.

3.5 QA plans by themselves are subject to breakdowns in human performance and therefore are in need of robust organisational structures that underpin the QA efforts of individuals.

4. QUALITY SYSTEM FOR THE ATO

4.1 A quality system is the aggregate of all the organisation's activities, plans, policies, processes, procedures, resources, incentives, and infrastructure working in unison towards a total quality management approach. It requires an organisational construct complete with policies, processes, procedures, and resources that underpins a commitment to achieve excellence in product and service delivery through the implementation of best practices in quality management.

4.2 An ATO that supports its QA plan with a well-designed, implemented and maintained quality system structure should be able to easily and repeatedly achieve results that exceed both the requirements of the applicable regulations and the expectations of the ATO's clients.

4.3 The basic attributes of an effective quality system should include, but are not necessarily limited to :

(*a*) A managerial structure that facilitates and encourages clear and unencumbered access to the decision makers ;

(*b*) An overarching company commitment to achieve excellence in training service delivery rather than meeting minimum requirements ;

(*c*) Quality policies, processes, and procedures that are well-designed, consistently applied and subject to formalised review and refinement processes ;

(*d*) An employee training plan that instills and promotes best practices in quality management efforts ;

(*e*) an organisational risk profile and corresponding risk management plan, which together provide a comprehensive list of hazards that are tied to the ATO's activities and establish mitigating measures to effectively manage those risks, which threaten the achievement of desired standards of performance ; and (*f*) a strategic review of policies and procedures, which measures the organisation's current assumptions, objectives and plans by applying a relevance test matched to evolving trends in the industry or changes occurring within the ATO.

5. ORGANISATIONAL RISK PROFILE

5.1 An organisational risk profile is an inventory of identified hazards and threats that present risks, which are likely to prevent conformity with the required standards of performance. This 'threat to quality' list is normally derived at by first establishing a directory of those activities that routinely take place in order to deliver and administer a training programme. Once complete, the activity directory is then expanded to identify the hazards and threats associated with each individual activity. Some examples of routine activities that should be examined during this process are :

(*a*) selection and training of staff ;

(*b*) training programme development, validation, and review ;

(*c*) development and maintenance of training courseware ;

(*d*) administrative staff duties in support of the training programme; instructors and evaluators, and students ;

(*e*) delivery of training ;

(*f*) record keeping ;

(*g*) assessment and examination processes ; and

(*h*) client and Authority feedback.

5.2 The risks identified through this exercise should not be limited to just those which currently exist, but should also include those potential risks that could arise from a change to existing circumstances or conditions.

6. RISK MANAGEMENT PLAN

6.1 A risk management plan is designed to mitigate the identified risks, real or potential, which were derived from the organisational risk profile exercise. The plan's objective is not to eliminate risk so much as it is to effectively manage risk by putting in place risk controlling measures.

6.2 A well developed and implemented risk management plan will substantially aid in accurately scoping out the depth and frequency of planned QA related activities.

6.3 The plan should be subject to the management review process outlined in paragraph 4.3(*f*) of this IS.

6.4. The current risk management plan should be readily accessible to all employees so that it can be accurately followed and open to comment for improvement.

7. Coherence Matrix

7.1. A coherence matrix, sometimes known as a correspondence matrix, is a very powerful addition to the ATO's compliance efforts. It is a detailed tabulated document that lists all the applicable regulatory requirements imposed on the ATO. Beside each listed provision there should be at least two descriptive elements that identify :

(*a*) the existing process(es) that is (are) designed to ensure continuous compliance with that specific regulatory rule or standard ; and

(*b*) the individual managerial position responsible for the effective implementation of each process.

7.2. The coherence matrix should indicate the next intended and most recently completed audits designed to validate the functionality of each of the identified process. Any recent audit findings should be listed in the matrix or referred to as being documented in a separate 'register of findings'. The coherence matrix is developed and managed by the quality manager and is subject to the management review process.

7.4 The current coherence matrix should be readily accessible to all employees so that it can be accurately followed and open to comment for improvement.

8. Corrective and Preventive Action Reports

8.1. Quality assurance plans should include a well-structured reporting system to ensure that suggestions by ATO personnel for both corrective and preventive actions are recorded and promptly addressed. Paragraph 3.3 (*f*) of this IS identifies this as a necessary component of QA.

8.2. After an analysis of the reports submitted, the reporting system should specify who is required to rectify a discrepancy and/or non-conformity in each particular case and the procedure to be followed if corrective action is not completed within an appropriate timescale. Just as important, the reporting system should identify who is required to investigate and act upon any report identifying measures that could prevent a non-conformity from occurring.

8.3. Corrective and preventive action reports should be able to be submitted anonymously, if individuals so choose, to maximise the opportunity for open and effective reporting.

Note : *Since corrective and preventive action reports, in this instance, represent suggestions for improvement in conformity levels and deal with quality issues, this reporting system and its processes should be managed by the quality manager.*

9. QUALITY-RELATED DOCUMENTATION

9.1. Relevant documentation includes part(s) of the Training and Procedures Manual, which may be included in a separate Quality Manual.

9.2. In addition, the relevant documentation should include the following :

(*a*) quality policy and strategy ;

(*b*) glossary ;

(*c*) organisational risk profile ;

(*d*) risk management plan ;

(*e*) coherence matrix ;

(*f*) corrective and preventive action procedures and reporting system ;

(*g*) specified training standards ;

(*h*) description of the organisation ;

(*i*) assignment of duties and responsibilities ; and

(*j*) training procedures related to the quality system to ensure regulatory compliance.

9.3. The QA audit programme documentation should reflect :

(*a*) the schedule of the monitoring process ;

(*b*) audit procedures ;

(*c*) reporting procedures ;

(*d*) follow-up and corrective action procedures ;

(*e*) the recording system ; and

(*f*) document control.

10. QUALITY ASSURANCE AUDIT PROGRAMME

The QA audit programme should include all planned and systematic actions necessary to provide confidence that every training activity is conducted in accordance with all applicable requirements, standards and procedures.

11. QUALITY INSPECTION

11.1. The primary purpose of a quality inspection is to review a document or observe a particular event, action, etc., in order to verify whether established training procedures and requirements are followed during the conduct of the inspection and whether the required standard is achieved.

11.2. Examples of typical subject areas for quality inspections are :

(a) actual training sessions ;

(b) maintenance, if applicable ;

(c) technical standards ; and

(d) training standards.

12. Quality Audits

12.1. An audit is a systematic and independent comparison between the way in which training is being conducted and the way in which it should be conducted according to the published training procedures.

12.2. Audits should include at least the following quality procedures and processes :

(*a*) a description of the scope of the audit, which should be explained to the audited personnel ;

(*b*) planning and preparation ;

(*c*) gathering and recording evidence ; and

(*d*) analysis of the evidence.

12.3. The various techniques that make up an effective audit are :

(*a*) a review of published documents ;

(*b*) interviews or discussions with personnel ;

(*c*) the examination of an adequate sample of records ;

(*d*) the witnessing of the activities which make up the training ; and

(*e*) the preservation of documents and the recording of observations.

13. Auditors

13.1. The ATO shall decide, depending on the complexity of the organisation and the training being conducted, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team should have relevant training and/or operational experience.

13.2 The responsibilities of the auditors shall be clearly defined in the relevant documentation.

14. Auditor's Independence

14.1. Auditors shall not have any day-to-day involvement in the area of the operation or maintenance activity that is to be audited.

14.2. An ATO may, in addition to using the services of full time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities through the use of part-time auditors. An ATO whose structure and size does not justify the establishment of full-time auditors may undertake the audit function using part-time personnel from within its own organisation or from an external source under the terms of an agreement acceptable to the Licensing Authority.

14.3. In all cases the ATO shall develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist has some familiarity with the type of activity conducted by the ATO.

14.4. The QA audit programme of the ATO shall identify the persons within the organisation who have the experience, responsibility and authority to :

(*a*) identify and record concerns or findings, and the evidence necessary to substantiate such concerns or findings ;

(*b*) initiate or recommend solutions to concerns or findings through designated reporting channels ;

(*c*) verify the implementation of solutions within specific and reasonable timescales ; and

(*d*) report directly to the quality manager.

15. AUDIT SCHEDULING

15.1. A QA audit programme shall include a defined audit schedule and a periodic review cycle. The schedule shall be flexible and allow unscheduled audits when negative trends are identified. The quality manager shall schedule follow-up audits when necessary to verify that a corrective action resulting from a finding was carried out and that it is effective.

15.2. An ATO shall establish a schedule of audits to be completed during a specific calendar period. This schedule shall be influenced by the organisational risk profile and be reflected in both the risk management plan and the coherence matrix documents. As a minimum, all aspects of the training shall be reviewed within a period of twelve months in accordance with the audit programme.

15.3. When an ATO defines the audit schedule, it should take into account significant changes to the management, organisation, training or technologies, as well as changes to the standards and requirements.

16. MONITORING AND CORRECTIVE ACTION

16.1 The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby ensure that defined policy and training standards are continuously complied with. Monitoring and corrective action functions fall under the responsibilities of the quality manager. Monitoring activity is based upon :

(*a*) quality inspections ;

(*b*) quality audits ; and

(*c*) corrective and preventive action reports, and subsequent follow-up.

16.2. Any non-conformity identified as a result of monitoring shall be communicated by the quality manager to the manager responsible for taking corrective action or, if appropriate, to the head of training or, when circumstances warrant, to the accountable executive. Such non conformity shall be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of an appropriate corrective action.

16.3. The QA audit programme shall include procedures to ensure that corrective and preventive actions are developed in response to findings. Personnel implementing these procedures shall monitor such actions to ensure that they have been completed and verify their effectiveness. Organisational responsibility and accountability for the implementation of a corrective action resides with the department where the finding was identified. The accountable executive will have the ultimate responsibility for ensuring, through the quality manager, that the corrective action has reestablished conformity with the standard required by the ATO and any additional requirements established by the Authority or the ATO.

16.4. As part of its quality system, the ATO should identify internal and external customers and monitor their satisfaction by measurement and analysis of feedback.

17. CONTINUOUS IMPROVEMENT PROCESS

17.1. The quality manager shall be responsible for the review and continuous improvement of the established quality system's policies, processes and procedures. The following tools, on which the quality manager relies, are essential to the on-going continuous improvement process :

(*a*) organisational risk profile ;

(*b*) risk management plan ;

(*c*) coherence matrix ;

(*d*) corrective and preventive action reports ; and

(*e*) inspection and audit reports.

17.2 These tools and processes are interrelated and help define the continuous improvement efforts of the organisation. For example, any corrective or preventive action report could identify a deficiency or an opportunity for improvement. As outlined in paragraph 8.2 of this IS, the quality manager would then be required to ensure the identified issue was addressed and effectively implemented. The same would be true, if the discovery of an issue was identified during an inspection or audit.

17.3. The effective implementation of change and the subsequent validation that the change did indeed result in the desired outcome is critical to the continuous improvement process. Simply introducing a well-meaning suggestion for improvement into the organisation without carefully managing that change could have undesirable consequences. It is therefore incumbent upon the quality manager to responsibly introduce, monitor, and validate improvement efforts.

18. MANAGEMENT REVIEW AND ANALYSIS

18.1. Management should accomplish a comprehensive, systematic and documented review and analysis of the quality system, training policies and procedures, and should consider:

(a) the results of quality inspections, audits and any other indicators;

(b) the overall effectiveness of the management organisation in achieving stated objectives; and

(c) the correction of trends, and prevention, where applicable, of future non conformities.

18.2. Conclusions and recommendations made as a result of the review and analysis should be submitted in writing to the responsible manager for action. The responsible manager should be an individual who has the authority to resolve relevant issues and take action. The head of training should decide upon the frequency, format and structure of meetings for internal review and analysis, in coordination with the accountable executive, if different, as the accountable executive has the overall responsibility for the quality system including the frequency, format and structure of the internal management review and analysis activities.

19. RECORDING

19.1 Accurate, complete and readily accessible records documenting the result of the QA audit programme shall be maintained by the ATO. Records are essential data to enable an ATO to analyse and determine the root causes of non conformity so that areas of non compliance can be identified and subsequently addressed.

19.2 Records shall be retained at least for the period that may be mandated by national requirements. In the absence of such requirements, a period of three years is recommended. The relevant records include :

(*a*) audit schedules ;

(*b*) quality inspection and audit reports ;

(*c*) responses to findings ;

(*d*) corrective and preventive action reports ;

(*e*) follow up and closure reports ; and

(*f*) management review and analysis reports.

20. QA Responsibility for Satellite ATOs

20.1. An ATO may decide to subcontract certain activities to external organisations subject to the approval of the Authority.

20.2. The ultimate responsibility for the training provided by the satellite ATO always remains with the ATO. A written agreement shall exist between the ATO and the satellite ATO clearly defining the training services to be provided and the level of quality to be assured. The satellite ATO's activities relevant to the agreement should be included in the ATO's QA audit programme.

20.3. The ATO shall ensure that the satellite ATO has the necessary authorisation/approval when required and commands the resources and competence to undertake the task.

21. QA Training

21.1. Appropriate and thorough training is essential to optimise quality in every organisation. In order to achieve the appropriate outcomes of such training, the ATO shall ensure that all staff members understand the objectives as laid out in the quality manual to a level relevant to their duties, including the:

(*a*) concept of QA and associated systems;

(*b*) quality management;

(*c*) quality manual;

(*d*) Inspections and audit techniques; and

(*e*) reporting and recording.

21.2. Time and resources shall be allocated to provide appropriate levels of QA training to every employee.

21.3. QA courses are available from the various national or international standards institutions, and an ATO should consider whether to offer such courses to those likely to be involved in the management or supervision of QA processes. Organisations with sufficient appropriately qualified staff should consider the possibility of providing in-house training.

Personnel for Flight Crew Training in the ATO.

IS : 3.3.3.—*(a)* The Head of Training shall have overall responsibility for ensuring satisfactory integration of flying training, flight simulation training and theoretical knowledge instruction and for supervising the progress of individual students. The Head of Training shall have had extensive experience in training as a flight instructor for professional pilot licences and possess a sound managerial capability.

(*b*) DUTIES AND QUALIFICATION OF A QUALITY MANAGER

The primary role of the quality manager is to verify, by monitoring activities in the field of training that th standards required by the Authority and any additional requirements as established by the ATO, are being carried out properly under the supervision of the Head of Training, Chief Flight Instructor and Chief Ground Instructor.

The minimum initial qualifications for a Quality Manager shall be :

(*i*) A technically qualified person in at one field of training to be conducted ;

(*ii*) At least three years experience in the training to be conducted ;

(*iii*) Must have successfully completed a training in quality management recognized by the Authority.

(*c*) The CFI shall be responsible for the supervision of flight and synthetic flight instructors and for the standardisation of all flight instruction and synthetic flight instruction. The CFI shall :

(*i*) hold the highest professional pilot licence related to the flying training courses conducted;

(*ii*) hold the rating(s) related to the flying training courses conducted ;

(*iii*) hold a flight instructor rating for at least one of the types of aircraft used on the course ; and

(*iv*) have completed 1,000 hours pilot-in-command flight time of which a minimum of 500 hours shall be on flying instructional duties related to the flying courses conducted, of which 200 hours may be instrument ground time.

(*d*) Flight instructors shall hold—

(*e*) a pilot licence and rating(s) in accordance with Nig. CARs Part 2 related to the flying training courses they are approved to conduct; and

(*f*) an instructor rating or authorisation in accordance with Nig. CARs Part 2, relevant to the part of the course being conducted e.g. flight instructor, flight instrument rating instructor, instructor for additional class or type rating(s), instructor for flight simulation training, as appropriate.

(*g*) Instructors for flight simulation training shall hold the authorisation in accordance with Nig. CARs Part 2 related to the flight simulation training courses they are appointed to conduct.

(*h*) Instructors for flight engineer licences and rating training shall hold:

(*i*) the licence and the rating(s) in accordance with Nig. CARs Part 2 related to the flight engineer licence and/or rating training courses they are appointed to conduct; and (*j*) an instructor rating in accordance with Nig. CARs Part 2, relevant to the part of the course being conducted.

(*k*) The Chief Ground Instructor shall—

(l) Be responsible for the supervision of all ground instructors and for the standardisation of all theoretical knowledge instruction; and

(m) shall have a practical background in aviation and have the appropriate ground instructor licence in accordance with NIG. CARS Part 2.

(n) Ground instructors shall be responsible for conducting ground training in subject areas required for a licence or rating. Ground instructors may have either a licence or be approved by the Authority in accordance with Nig. CARs Part 2, depending upon the subject matter to be taught.

(o) Ground instructors, who are approved by the Authority but not licensed, who teach knowledge subjects for licences sand ratings shall have appropriate experience in aviation and shall, before appointment, give proof of their competency by giving a lecture based on material they have developed for the subjects they are to teach.

Training Manual and Procedures Manual for ATO Conducting Flight Crew Training.

IS : 3.3.5.1—(*a*) The Training and Procedures Manual for use at an ATO conducting approved training courses shall include the following :

PART 1

1. GENERAL

1.1. Preamble relating to the use and applicability of the manual.

1.2. Table of contents.

1.3. Amendment, revision and distribution of the manual:

(*a*) procedures for amendment ;

(*b*) amendment record page ;

(*c*) distribution list ; and

(*d*) list of effective pages.

1.4. Glossary of definitions and significant terms, including a list of acronyms and/or abbreviations.

1.5. Description of the structure and layout of the manual, including:

(*a*) the various parts, sections, as well as their contents and use; and

(*b*) the paragraph numbering system.

1.6. Description of the scope of training authorised under the organisation's terms of approval.

1.7. Organisation (chart of the ATO's management organisation), and the name of the post holders.

1.8. Qualifications, responsibilities and succession of command of management and key operational personnel, including but not limited to :

(*a*) accountable executive ;

(*b*) head of training ;

(*c*) instructional services manager ;

(*d*) quality manager ;

(*e*) maintenance manager, if applicable ;

(*f*) safety manager, if applicable ;

(*g*) instructors ; and

(*h*) examiners, evaluators, and auditors.

1.9. Policies dealing with :

(*a*) the training organisation's objectives, including ethics and values ;

(*b*) the selection of ATO personnel and the maintenance of their qualifications ;

(*c*) the training programme design and development, including the need for programme validation and review, as well as the outsourcing of training programme development to third-party providers ;

(*d*) the evaluation, selection, and maintenance of training material and devices ;

(*e*) the maintenance of the training facilities and equipment ;

(*f*) developing and maintaining a quality system governance model ; and

(*g*) developing and maintaining a culture focused on safety in the workplace, including, when applicable, implementing a safety management system governance model.

1.10. Description of the facilities and equipment available, including :

(*a*) general use facilities, including offices, stores and archives, library or reference areas) ;

(*b***)** the number and size of classrooms, including installed equipment ; and

(*c*) the type and number of training devices, including their location if other than at the main training site.

2. STAFF TRAINING

2.1. Identification of persons or positions responsible for the maintenance of performance standards and for ensuring the competency of personnel.

2.2. Details of the procedures to validate the qualifications and determine the competency of instructional personnel as required by Nig. CARs 3: 3.2.1.14.

2.3. Details of the initial and recurrent training programmes for all personnel as required by Nig. CARs Part 3: 3.2.1.14.

2.4. Procedures for proficiency checks and upgrade training.

3.0. The client training programmes cover each individual training programme conducted by the training organisation for its customers. The training programmes consist of a training plan, a practical training syllabus and a theoretical knowledge syllabus, if applicable, as described in paragraphs 3.1, 3.2 and 3.3 below.

3.1. Training Plan

3.1.1. The aim of the course in the form of a statement of what the student is expected to be able to do as a result of the training, the level of performance, and the training constraints to be observed.

3.1.2. Pre-entry requirements, including :

(a) minimum age ;

(b) education or qualification requirements ;

(c) medical requirements ; and

(d) linguistic requirements.

3.1.3. Credits for previous knowledge, experience or other qualifications, which should be obtained from the Licensing Authority before the training commences.

3.1.4. Training Curricula, including the :

(*a*) theoretical training (knowledge) ;

(*b*) practical training (skills) ;

(*c*) training in the domain of human factors (attitudes) ;

(*d*) assessment and examinations ; and

(*e*) monitoring of the training process, including the assessment and examination activities.

3.1.5. Training policies in terms of :

(*a*) restrictions regarding the duration of training periods for students and instructors ; and

(*b*) if applicable, minimum rest periods.

3.1.6. Policy for the conduct of student evaluation, including the :

(*a*) procedures for authorisation for tests;

(*b*) procedures for remediation training before retest and knowledge test re write procedures ;

(*c*) test reports and records ;

(*d*) procedures for skill progress checks and skill tests ;

(*e*) procedures for knowledge progress tests and knowledge tests, including procedures for knowledge test preparation, type of questions and assessments, and standards required for a pass ; and

(f) procedures for question analysis and review and for issuing replacement exams (applicable to knowledge tests).

3.1.7. Policy regarding training effectiveness, including :

(*a*) liaison procedures between training departments ;

(*b*) requirements for reporting and documentation ;

(*c*) internal feedback system for detecting training deficiencies ;

(*d*) completion standards at various stages of training to ensure standardisation ;

(*e*) individual student responsibilities ;

(*f*) procedures to correct unsatisfactory progress ;

(g) procedures for changing instructors ;

(h) maximum number of instructor changes per student ; and

(i) procedures for suspending a student from training.

3.2. SYLLABI FOR NON-COMPETENCY-BASED TRAINING PROGRAMMES

3.2.1. Practical training syllabus.

3.2.1.1. A statement of how the course will be divided into phases, indicating how the phases will be arranged to ensure completion in the most suitable learning sequence and that exercises are repeated at the proper frequency.

3.2.1.2. The syllabus hours for each phase and for groups of lessons within each phase and when progress tests are to be conducted.

3.2.1.3. A statement of the standard of proficiency required before progressing from one phase of training to the next. It includes minimum experience requirements and satisfactory exercise completion before undertaking the next phase.

3.2.1.4. Requirements for instructional methods, particularly with respect to adherence to syllabi and training specifications.

3.2.1.5. Instruction for the conduct and documentation of all progress checks.

3.2.1.6. Instruction, where applicable, given to all examining staff regarding the conduct of examinations and tests.

3.2.2. Theoretical knowledge syllabus

The syllabus for theoretical knowledge instruction should be structured generally as in paragraph 3.2 above but with a training specification and objective for each subject.

3.3. SYLLABUS FOR COMPETENCY-BASED TRAINING PROGRAMMES

3.3.1. Training programmes focused on achieving desired standards of performance for specific jobs or tasks should be competency-based.

3.3.2. Competency-based training programmes are based upon a job and task analysis to define the knowledge, skills and attitudes required to perform a job or a task. Such programmes use an integrated approach in which the training of the underlying knowledge to perform a task is followed by practice of the task so that the trainee acquires the underlying knowledge, skills and attitudes related to the task in a more effective way.

3.3.3. As a result, the syllabus is structured as a single document that is subdivided in modules containing a training objective and the same information as in 3.2.1, but applied to both the theoretical knowledge and practical training delivered by the module.

4. TESTS AND CHECKS CONDUCTED BY THE ATO FOR THE ISSUANCE OF A LICENCE OR A RATING

4.1.—*(a)* the name(s) of the personnel with testing authority and the scope of the authority :

(*b*) the role and duties of the authorised personnel ;

(*c*) if the school has been given authority to appoint personnel to conduct the testing required for the issuance of a licence or rating, the minimum requirements for appointment as well as the selection and appointment procedure ; and

(*d*) the applicable requirements established by the Licensing Authority, such as :

(*i*) The procedures to be followed in the conduct of checks and tests ; and

(*ii*) the methods for completion and retention of testing records as required by the Authority.

5. RECORDS

5.1.—*(a)* attendance records :

(*a*) student training records ;

(*b*) staff training and qualification records ;

(*c*) person responsible for checking records and student personal logs ;

(*d*) nature and frequency of record checks ;

(*e*) standardisation of record entries ;

(*f*) personal log entries ; and

(*g*) security of records and documents.

6. SAFETY MANAGEMENT SYSTEM (*if applicable*)

6.1. The requirement to adopt SMS practices is intended to be restricted to only those training entities whose activities directly impact upon the safe operation of aircraft. Should that requirement apply to the ATO, the Training and Procedures Manual, as stated in paragraph 1.9 above, must address the ATO's SMS with reference to a separate manual or include the SMS practices within the Training and Procedures Manual.

7. QUALITY ASSURANCE

7.1. Provide a brief description of the quality assurance practices, as required by paragraph 3 of IS 3.2.1.17, with reference to a separate quality manual or include the QA practices within the Training and Procedures Manual.

8. APPENDICES

8.1.—As required :

(*a*) sample progress test forms ;

(*b*) sample logs, test reports and records ; and

(*c*) a copy of the approved training organisation's approval document.

PART II—ADDITIONAL CONTENT FOR FLIGHT TRAINING ORGANISATIONS (UTILISING AIRCRAFT)

9. FLIGHT TRAINING—GENERAL

9.1. Qualifications, responsibilities and succession of command of management and key operational personnel (in addition to paragraph 1.8 above), including but not limited to :

(*a*) chief flight instructor ; and

(*b*) chief ground instructor.

9.2. Policies and procedures (in addition to paragraph 1.9 above) dealing with :

(*a*) approval of flights ;

(*b*) responsibilities of the pilot-in-command ;

(*c*) flight planning procedures—general ;

(*d*) carriage of passengers ;

(*e*) operational control system ;

(*f*) reporting of safety hazards, incidents and accidents ;

(*g*) duty periods and flight time limitations for flying staff members and students ; and

(*h*) minimum rest periods for flying staff members and students.

9.3. Description of the facilities and equipment available (in addition to paragraph 1.10 of this IS), including :

(*a*) Flight simulation training devices and training aircraft ;

(*b*) Maintenance facilities and apron parking areas for training aircraft ;

(*c*) Computer-based classroom(s) ; and

(d) Dispatch control and briefing areas.

10. AIRCRAFT OPERATING INFORMATION

10.1. Certification and operating limitations.

10.2. Aircraft handling, including :

(*a*) performance limitations ;

(*b*) use of checklists ;

(c) standard operating procedures ; and

(d) aircraft maintenance procedures.

10.3. Instructions for aircraft loading and securing of load.

10.4. Fuelling procedures.

10.5. Emergency procedures.

11. ROUTES

11.1. Performance criteria, e.g. take-off, en route, landing, etc.

11.2. Flight planning procedures including :

(*a*) fuel and oil requirements ;

(*b*) minimum safe altitudes ;

(*c*) planning for contingencies (e.g. emergency or diversion scenarios) ; and

(*d*) navigation equipment.

11.3. Weather minima for all instructional training flights during day, night, VFR and IFR operations.

11.4. Weather minima for all student training flights at various stages of training.

11.5. Training routes and practice areas.

12. FLIGHT TRAINING PLAN

12.1. Training curricula (in addition to paragraph 3.1.4 above), including, as applicable, the :

(*a*) flying curriculum (single-engine) ;

(*b*) flying curriculum (multi-engine) ;

(*c*) theoretical knowledge curriculum ; and

(*d*) flight simulation training curriculum.

12.2. The general arrangements of daily and weekly programmes for flying training, ground training and flight simulation training.

12.3. Training policies (in addition to paragraph 3.1.5 above) in terms of :

(a) weather constraints ;

(b) maximum student training times for flight, theoretical knowledge and flight simulation training, per day/week/month ;

(c) restrictions in respect of training periods for students ;

(d) duration of training flights at various stages ;

(e) maximum individual student flying hours in any day or night period ;

(f) maximum number of individual student training flights in any day or night period ; and

(g) minimum rest periods between training periods.

Training and Procedures Manual for ATO Conducting Maintenance Training.

IS: 3.4.5.1—(*a*) The Training and Procedures Manual for use at an ATO conducting approved training courses shall include the following :

PART 1

1. GENERAL

1.1. Preamble relating to the use and applicability of the manual.

1.2. Table of contents.

1.3. Amendment, revision and distribution of the manual :

(*a*) procedures for amendment ;

(*b*) amendment record page ;

(*c*) distribution list ; and

(*d*) list of effective pages.

1.4. Glossary of definitions and significant terms, including a list of acronyms and/or abbreviations.

1.5. Description of the structure and layout of the manual, including :

(*a*) the various parts, sections, as well as their contents and use ; and

(*b*) the paragraph numbering system.

1.6. Description of the scope of training authorised under the organisation's terms of approval.

1.7. Organisation (chart of the ATO's management organisation), and the name of the post holders.

1.8. Qualifications, responsibilities and succession of command of management and key operational personnel, including but not limited to :

(*a*) accountable executive ;

(*b*) head of training ;

(*c*) instructional services manager ;

(*d*) quality manager ;

(*e*) maintenance manager, if applicable ;

(*f*) safety manager, if applicable ;

(*g*) instructors ; and

(h) examiners, evaluators, and auditors.

1.9. Policies dealing with :

(*a*) the training organisation's objectives, including ethics and values ;

(*b*) the selection of ATO personnel and the maintenance of their qualifications ;

(*c*) the training programme design and development, including the need for programme validation and review, as well as the outsourcing of training programme development to third-party providers ;

(*d*) the evaluation, selection, and maintenance of training material and devices ;

(*e*) the maintenance of the training facilities and equipment ;

(*f*) developing and maintaining a quality system governance model and

(*g*) developing and maintaining a culture focused on safety in the workplace, including, when applicable, implementing a safety management system governance model.

1.10.—(*a*) general use facilities, including offices, stores and archives, library or reference areas) ;

(*b*) the number and size of classrooms, including installed equipment ; and

(*c*) the type and number of training devices, including their location if other than at the main training site.

2. STAFF TRAINING

2.1. Identification of persons or positions responsible for the maintenance of performance standards and for ensuring the competency of personnel.

2.2. Details of the procedures to validate the qualifications and determine the competency of instructional personnel as required by Nig. CARs Part 3: 3.2.1.14.

2.3. Details of the initial and recurrent training programmes for all personnel, including awareness training with respect to their responsibilities within the ATO's system governance processes.

2.4. Procedures for proficiency checks and upgrade training.

3.0. CLIENT TRAINING PROGRAMMES

The client training programmes cover each individual training programme conducted by the training organisation for its customers. The training programmes consist of a training plan, a practical training syllabus and a theoretical knowledge syllabus, if applicable, as described in paragraphs 3.1, 3.2 and 3.3 below.

3.1. TRAINING PLAN

3.1.1. The aim of the course in the form of a statement of what the student is expected to be able to do as a result of the training, the level of performance and the training constraints to be observed.

3.1.2. Pre-entry requirements, including :

(*a*) minimum age ;

(*b*) education or qualification requirements ;

(*c*) medical requirements ; and

(*d*) linguistic requirements.

3.1.3. Credits for previous knowledge, experience or other qualifications, which should be obtained from the Licensing Authority before the training commences.

3.1.4. Training curricula, including the :

(*a*) theoretical training (knowledge) ;

(*b*) practical training (skills) ;

(*c*) training in the domain of human factors (attitudes) ;

(*d*) assessment and examinations ; and

(*e*) monitoring of the training process, including the assessment and examination activities.

3.1.5. Training policies in terms of :

(a) restrictions regarding the duration of training periods for students and instructors ; and

(b) if applicable, minimum rest periods.

3.1.6. Policy for the conduct of student evaluation, including the :

(a) procedures for authorisation for tests ;

(b) procedures for remediation training before retest and knowledge test re write procedures ;

(*c*) test reports and records ;

(*d*) procedures for skill progress checks and skill tests ;

(*e*) procedures for knowledge progress tests and knowledge tests, including procedures for knowledge test preparation, type of questions and assessments, and standards required for a pass ; and

(*f*) procedures for question analysis and review and for issuing replacement exams (applicable to knowledge tests).

3.1.7. Policy regarding training effectiveness, including :

(*a*) liaison procedures between training departments ;

(*b*) requirements for reporting and documentation ;

(*c*) internal feedback system for detecting training deficiencies ;

(*d*) completion standards at various stages of training to ensure standardisation ;

(*e*) individual student responsibilities ;

(*f*) procedures to correct unsatisfactory progress ;

(*g*) procedures for changing instructors ;

(*h*) maximum number of instructor changes per student ; and

(*i*) procedures for suspending a student from training.

3.2. SYLLABI FOR NON-COMPETENCY-BASED TRAINING PROGRAMMES.

3.2.1. Practical training syllabus.

3.2.1.1. A statement of how the course will be divided into phases, indicating how the phases will be arranged to ensure completion in the most suitable learning sequence and that exercises are repeated at the proper frequency.

3.2.1.2. The syllabus hours for each phase and for groups of lessons within each phase and when progress tests are to be conducted.

3.2.1.3. A statement of the standard of proficiency required before progressing from one phase of training to the next. It includes minimum experience requirements and satisfactory exercise completion before undertaking the next phase.

3.2.1.4. Requirements for instructional methods, particularly with respect to adherence to syllabi and training specifications.

3.2.1.5. Instruction for the conduct and documentation of all progress checks.

3.2.1.6. Instruction, where applicable, given to all examining staff regarding the conduct of examinations and tests.

3.2.2. Theoretical Knowledge Syllabus

The syllabus for theoretical knowledge instruction should be structured generally as in paragraph 3.2 above but with a training specification and objective for each subject.

3.3. Syllabus for Competency-Based Training Programmes

3.3.1. Training programmes focused on achieving desired standards of performance for specific jobs or tasks should be competency-based.

3.3.2. Competency-based training programmes are based upon a job and task analysis to define the knowledge, skills and attitudes required to perform a job or a task. Such programmes use an integrated approach in which the training of the underlying knowledge to perform a task is followed by practice of the task so that the trainee acquires the underlying knowledge, skills and attitudes related to the task in a more effective way.

3.3.3. As a result, the syllabus is structured as a single document that is subdivided in modules containing a training objective and the same information as in 3.2.1, but applied to both the theoretical knowledge and practical training delivered by the module.

4. Tests and Checks Conducted by the ATO for the Issuance of a Licence or a Rating

4.1. When the Authority has approved an ATO to conduct the testing required for the issuance of a licence or rating in accordance with the Training and Procedures Manual, the manual should include :

(*a*) the name(s) of the personnel with testing authority and the scope of the authority ;

(*b*) the role and duties of the authorised personnel ;

(*c*) if the school has been given authority to appoint personnel to conduct the testing required for the issuance of a licence or rating, the minimum requirements for appointment as well as the selection and appointment procedure ; and

(*d*) the applicable requirements established by the Licensing Authority, such as :

(*i*) The procedures to be followed in the conduct of checks and tests ; and

(*ii*) the methods for completion and retention of testing records as required by the Authority.

5. Records

5.1. Policy and procedures regarding :

(*a*) attendance records ;

(*b*) student training records ;

(*c*) staff training and qualification records ;

(*d*) person responsible for checking records and student personal logs ;

(e) nature and frequency of record checks ;

(f) standardisation of record entries ;

(g) personal log entries ; and

(h) security of records and documents.

6. Safety Management System (*if applicable*)

6.1. The requirement to adopt SMS practices is intended to be restricted to only those training entities whose activities directly impact upon the safe operation of aircraft. Should that requirement apply to the ATO, the Training and Procedures Manual, as stated in paragraph 1.9 above, must address the ATO's SMS with reference to a separate manual or include the SMS practices within the Training and Procedures Manual.

7. Quality Assurance

7.1 Provide a brief description of the quality assurance practices with reference to a separate quality manual or include the QA practices within the Training and Procedures Manual.

8. Appendices

8.1. As required :

(*a*) sample progress test forms ;

(*b*) sample logs, test reports and records ; and

(*c*) a copy of the approved training organisation's approval document.

IS : 3.5.5.2—(*a*) The Training and Procedures Manual for use at an ATO conducting approved training courses shall include the following :

Part 1

1. General

1.1. Preamble relating to the use and applicability of the manual.

1.2. Table of contents.

1.3. Amendment, revision and distribution of the manual :

(a) procedures for amendment ;

(b) amendment record page ;

(c) distribution list ; and

(d) list of effective pages.

1.4. Glossary of definitions and significant terms, including a list of acronyms and/or abbreviations.

1.5. Description of the structure and layout of the manual, including :

Policy and procedures regarding:

(*a*) the various parts, sections, as well as their contents and use; and

(*b*) the paragraph numbering system.

1.6. Description of the scope of training authorised under the organisation's terms of approval.

1.7. Organisation (chart of the ATO's management organisation), and the name of the post holders.

1.8. Qualifications, responsibilities and succession of command of management and key operational personnel, including but not limited to :

(*a*) accountable executive ;

(*b*) head of training ;

(*c*) instructional services manager; if applicable ;

(*d*) quality manager ;

(*e*) instructors ; and

(*f*) Examiners, evaluators, and auditors, if applicable.

1.9. Policies dealing with :

(*a*) the training organisation's objectives, including ethics and values ;

(*b*) the selection of ATO personnel and the maintenance of their qualifications ;

(*c*) the training programme design and development, including the need for programme validation and review, as well as the outsourcing of training programme development to third-party providers ;

(*d*) the evaluation, selection, and maintenance of training material and devices ;

(*e*) the maintenance of the training facilities and equipment ;

(*f*) developing and maintaining a quality system governance model ; and

(*g*) developing and maintaining a culture focused on safety in the workplace, including, when applicable, implementing a safety management system governance model.

1.10. Description of the facilities and equipment available, including :

(a) general use facilities, including offices, stores and archives, library or reference areas) ;

(b) the number and size of classrooms, including installed equipment ; and

(c) the type and number of training devices, including their location if other than at the main training site.

2. Staff Training

2.1. Identification of persons or positions responsible for the maintenance of performance standards and for ensuring the competency of personnel.

2.2. Details of the procedures to validate the qualifications and determine the competency of instructional personnel as required by this Regulation.

2.3. Details of the initial and recurrent training programmes for all personnel, including awareness training with respect to their responsibilities within the ATO's system governance processes.

3.0. Client Training Programmes

The client training programmes cover each individual training programme conducted by the training organisation for its customers. The training programmes consist of a training plan, a practical training syllabus and a theoretical knowledge syllabus, if applicable, as described in paragraphs 3.1, 3.2 and 3.3 below.

3.1. Training Plan

3.1.1. The aim of the course in the form of a statement of what the student is expected to be able to do as a result of the training, the level of performance, and the training constraints to be observed.

3.1.2. Pre-entry requirements, including :

(a) minimum age ;

(b) education or qualification requirements ;

(c) medical requirements ; and

(d) linguistic requirements.

3.1.3. Credits for previous knowledge, experience or other qualifications, which should be obtained from the Authority before the training commences.

3.1.4.—(a) theoretical training (knowledge) ;

(b) practical training (skills) ;

(c) training in the domain of human factors (attitudes), as applicable ;

(d) assessment and examinations ; and

(*e*) monitoring of the training process, including the assessment and examination activities.

3.1.5. Training policies in terms of :

(*a*) restrictions regarding the duration of training periods for students and instructors ; and

(*b*) if applicable, minimum rest periods.

3.1.6. Policy for the conduct of student evaluation, including the :

(*a*) procedures for authorisation for tests ;

(*b*) procedures for remediation training before retest and knowledge test re write procedures ;

(*c*) test reports and records ;

(*d*) procedures for skill progress checks and skill tests ;

(*e*) procedures for knowledge progress tests and knowledge tests, including procedures for knowledge test preparation, type of questions and assessments, and standards required for a pass ; and

(*f*) procedures for question analysis and review and for issuing replacement exams (applicable to knowledge tests).

3.1.7. Policy regarding training effectiveness, including :

(*a*) liaison procedures between training departments ;

(*b*) requirements for reporting and documentation ;

(*c*) internal feedback system for detecting training deficiencies ;

(*d*) completion standards at various stages of training to ensure standardisation ;

(e) individual student responsibilities ;

(*f*) procedures to correct unsatisfactory progress ;

(*g*) procedures for changing instructors ;

(*h*) maximum number of instructor changes per student ; and

(*i*) procedures for suspending a student from training.

3.2.1. PRACTICAL TRAINING SYLLABUS

3.2.1.1. A statement of how the course will be divided into phases, indicating how the phases will be arranged to ensure completion in the most suitable learning sequence and that exercises are repeated at the proper frequency.

3.2.1.2. The syllabus hours for each phase and for groups of lessons within each phase and when progress tests are to be conducted.

3.2.1.3. A statement of the standard of proficiency required before progressing from one phase of training to the next. It includes minimum experience requirements and satisfactory exercise completion before undertaking the next phase.

3.2.1.4. Requirements for instructional methods, particularly with respect to adherence to syllabi and training specifications.

3.2.1.5. Instruction for the conduct and documentation of all progress checks.

3.2.1.6. Instruction, where applicable, given to all examining staff regarding the conduct of examinations and tests.

3.2.2. THEORETICAL KNOWLEDGE SYLLABUS

The syllabus for theoretical knowledge instruction should be structured generally as in paragraph 3.2 above but with a training specification and objective for each subject.

4. RECORDS

4.1. Policy and procedures regarding :

(*a*) attendance records ;

(*b*) student training records ;

(*c*) staff training and qualification records ;

(*d*) person responsible for checking records and student personal logs ;

(*e*) nature and frequency of record checks ;

(*f*) standardisation of record entries ;

(*g*) personal log entries ; and

(*h*) security of records and documents.

5. SAFETY MANAGEMENT SYSTEM (*if applicable*)

5.1. The requirement to adopt SMS practices is intended to be restricted to only those training entities whose activities directly impact upon the safe operation of aircraft. Should that requirement apply to the ATO, the Training and Procedures Manual, as stated in paragraph 1.9 above, must address the ATO's SMS with reference to a separate manual or include the SMS practices within the Training and Procedures Manual.

6. QUALITY ASSURANCE

6.1. Provide a brief description of the quality assurance practices with reference to a separate quality manual or include the QA practices within the Training and Procedures Manual.

7. APPENDICES

7.1. As required.

(*a*) sample progress test forms ;

(*b*) sample logs, test reports and records ; and

(*c*) a copy of the approved training organisation's approval document.

DIAGRAM 1—ORGANISATIONAL STRUCTURE OF THE ATO

The following organisational charts are by no means exhaustive and do not pretend to meet all operational requirements. They are provided only to assist training organisations in developing and maintaining an organizational structure that is consistent with the needs of an effective quality system governance model.

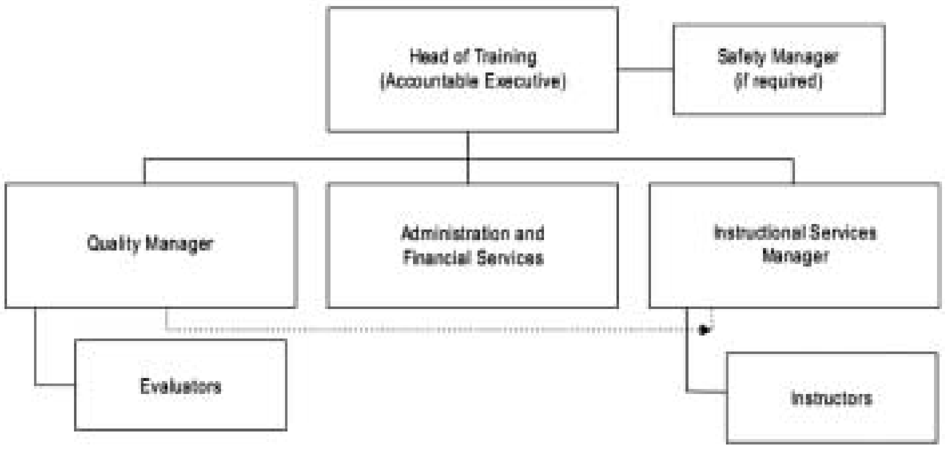
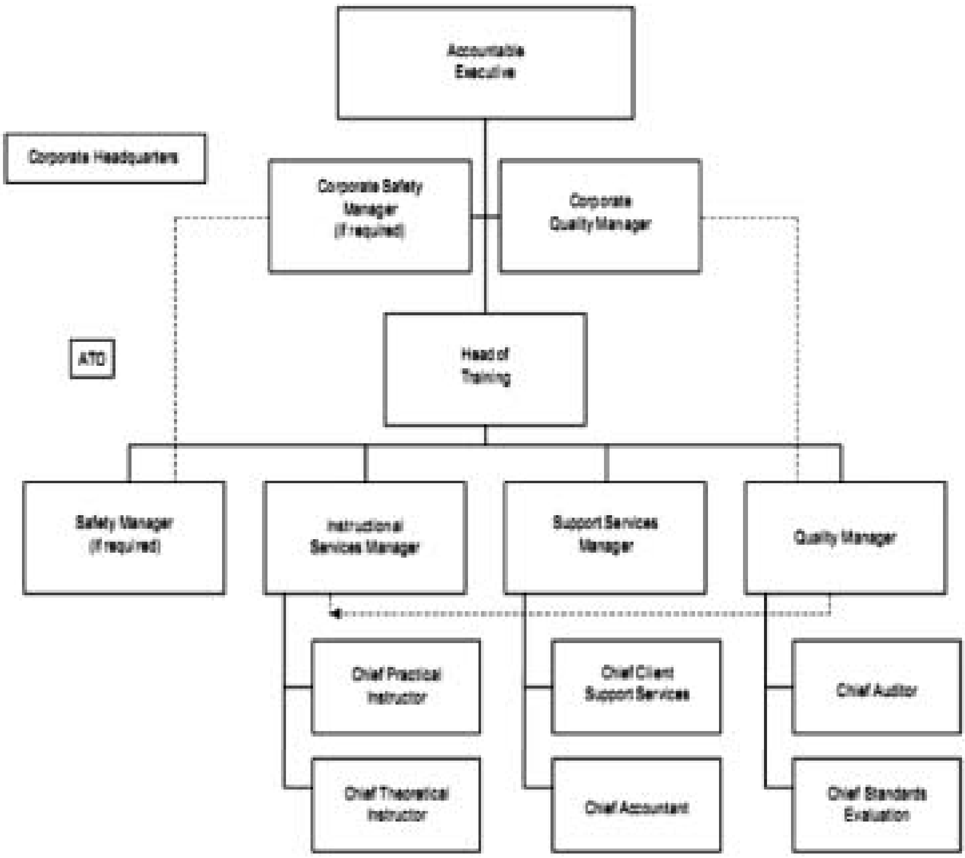


DIAGRAM 2


Accountable Executive
Corporate Headquarters
Corporate Safety Manager (if required)
Corporate Quality Manager
ATO
Head of Training
Safety Manager (if required)
Instructional Services Manager
Support Services Manager
Quality Manager
Chief Practical Instructor
Chief Theoretical Instructor
Chief Client Support Services
Chief Accountant
Chief Auditor
Chief Standards Evaluation

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NIGERIA CIVIL AVIATION REGULATIONS

PART 4—AIRCRAFT REGISTRATION AND MARKING

INTRODUCTION

This Part 4 of the Regulations sets forth the requirements for registration of aircraft in Nigeria, and governs the application of nationality and registration marks.

NIGERIA CIVIL AVIATION REGULATIONS

PART 4—AIRCRAFT REGISTRATION AND MARKING

Arrangement of Content

Contents

NIGERIA CIVIL AVIATION REGULATIONS

PART 4—AIRCRAFT REGISTRATION AND MARKING

4.1. GENERAL

4.1.1.1—(*a*) This part prescribes the requirements for registration and marking of Civil Aircraft under the provisions of the Civil Aviation Act 2006. Applicability.

(*b*) This part does not apply to :

(1) Meteorological pilot balloons used exclusively for meteorological purposes ;

(*2*) To unmanned free balloons without a payload; or

(*3*) Nigerian military aircraft.

4.1.1.2.—(*a*) For the purpose of Part 4, the following definitions shall apply : Definitions.

(1) *Aeroplane*—A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(2) *Aircraft*—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(3) *Airship*—A power-driven lighter-than-air aircraft.

(4) *Autonomous Aircraft*—An unmanned aircraft that does not allow pilot intervention in the management of the flight.

(5) *Balloon*—A non-power-driven lighter-than-air aircraft.

(6) *Common Mark*—A mark assigned by the International Civil Aviation Organisation to the common mark registering authority registering aircraft of an international operating agency on other than a national basis.

(7) *Common Mark Registering Authority*—The authority maintaining the non-national register or, where appropriate, the part thereof, in which aircraft of an international operating agency are registered.

(8) *Fireproof Material*—A material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose.

(9) *Glider*—A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(10) *Gyroplane*—A heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors which rotate freely on substantially vertical axes.

(11) *Heavier-than-air Aircraft*—Any aircraft deriving its lift in flight chiefly from aerodynamic forces.

(12) *Helicopter*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

(13) *International Operating Agency*—An agency of the kind contemplated in Article 77 of the Convention on International Civil Aviation.

(14) *Lighter-than-air Aircraft*—Any aircraft supported chiefly by its buoyancy in the air.

(15) *Ornithopter*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on planes to which a flapping motion is imparted.

(16) *Powered lift*—A heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight that depends principally on engine-driven lift devices or engine thrust for lift during these flight regimes and on nonrotating airfoil(s) for lift during horizontal flight.

(17) Remotely piloted aircraft (RPA). : An unmanned aircraft which is piloted from a remote pilot station.

(18) *Rotorcraft*—A power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors.

(19) *State of Registry*—The state on whose register the aircraft is entered.

Abbreviations.

4.1.1.3—(*a*) The following abbreviations are used in Part 4 :

(1) RPA : Remotely piloted aircraft.

4.2 REGISTRATION REQUIREMENTS

General.

4.2.1.1—(*a*) No person may operate a civil aircraft that is eligible for registration under the laws of Nigeria unless it has been registered by its owner or operator under the provisions of the laws of Nigeria and the Authority has issued a certificate of registration for that aircraft which shall be carried aboard that aircraft for all operations.

(*b*) The certificate of aircraft registration shall be in English language.

(*c*) The certificate of aircraft registration will be issued by the Authority in the form as contained in IS 4.2.1.1 and will be of a size determined by the Authority.

Registration Eligibility.

4.2.1.2—(*a*) An aircraft is eligible for registration if it is—

(1) Owned by :

(*i*) A citizen of Nigeria,

(*ii*) An individual citizen of another State who is lawfully admitted for permanent residence in Nigeria, (*iii*) A corporation lawfully organised and doing business under the laws of Nigeria and the aircraft is based and primarily used in Nigeria,

(*iv*) A government entity of Nigeria or political subdivision thereof; or

(*v*) A foreign person who has leased the aircraft to one of the persons described in paragraphs (*i*)-(*iv*) above, provided that :

(*a*) The aircraft may remain on the Nigerian registry only for as long as the lease remains in effect ; and

(*b*) The certificate of registration includes the names and addresses of the lessee and, if different, the operator of the aircraft; and

(2) Not registered under the laws of any other State; and

(3) The aircraft is not more than 22 years old, unless the aircraft is used exclusively for general aviation purposes.

Deregistration.

4.2.1.3.—(*a*) The Authority shall remove an aircraft from the Nigerian registry if :

(1) The owner of the aircraft does not meet the eligibility standards of Section 4.2.1.2.

(2) If a holder of a valid de-registration Power of Attorney applies to the Authority for de-registration.

(3) When the holder of a Certificate of Registration, owner or lessor or his duly authorized attorney applies in writing for de-registration of the aircraft from the Nigerian Register.

(4) When the Authority is satisfied that :

(*i*) The aircraft is destroyed, lost or stolen and cannot be found or ;

(*ii*) The aircraft is permanently withdrawn from use or ;

(*iii*) The aircraft is registered in a country other than Nigeria or ;

(*iv*) The aircraft has a Certificate of Airworthiness which has lapsed for 5 or more years ; or

(*v*) The lease agreement upon which the aircraft was registered has expired or is terminated and a duly executed Irrevocable Deregistration and Export Request Authorization presented except where the owner indicates in writing of his desire for the aircraft to remain registered in Nigeria.

(5) Where the Authority exercises its power of de-registration of an aircraft, the Certificate of Registration shall be cancelled and the entry of the aircraft in the aircraft register shall be deleted.

(6) Nothing in this section shall require the Authority to cancel the registration of an aircraft if, in its opinion, it would be inexpedient in the public interest to do so.

Application

4.2.1.4.—(*a*) A person who wishes to register an aircraft in Nigeria must submit an application for aircraft registration to the Authority in a form and manner acceptable to the Authority. Each application shall—

(1) Certify as to compliance with 4.2.1.2 ;

(2) Show evidence identifying ownership ; and

(3) Be signed in ink.

(*b*) Upon an applicant meeting all requirements for registration, a certificate of registration will be issued by the Authority.

Aircraft Registry.

4.2.1.5.—(*a*) As required by the Civil Aviation Act 2006, the Authority shall maintain an aircraft registry showing for each aircraft registered by Nigeria the information recorded on the certificate of aircraft registration and any other information required by the Authority. The register of unmanned free balloons shall contain the date, time and location of release, the type of balloon and the name of the operator.

(*b*) Upon request, Nigeria will provide information to another ICAO Contracting State or to ICAO as to aircraft registration and/or ownership of any particular aircraft registered in Nigeria.

(*c*) Persons who intend to access the register of aircraft for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

Legal Interest Registry.

4.2.1.6.—(*a*) The Authority shall establish and maintain a Legal Interests in Aircraft Registry showing for each aircraft registered in Nigeria, proprietary rights, interests, liens and other dealings thereon.

(*b*) The requirements for registration of legal Interests in aircraft shall be as prescribed by the Authority.

(*c*) Persons who intend to access the register of legal interest in aircraft for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as maybe prescribed by the Authority.

Indemnity.

4.2.1.7.—(*a*) The Authority shall not be liable for any damages, claims and actions arising from any defects in documents, records and depositions submitted to it in support of any application for registration or deregistration of an aircraft.

(*b*) Applicant for registration or de-registration of aircraft shall indemnify the Authority against any damages, cost liabilities arising from third (3) party claims and actions based on misrepresentation and defective documents submitted in support of an application for registration or de-registration.

Classification of Aircraft.

4.2.1.8.—(*a*) Aircraft shall be classified in accordance with the Table in IS: 4.2.1.8.

(*b*) An aircraft which is intended to be operated with no pilot on board shall be further classified as unmanned.

(*c*) Unmanned aircraft shall include unmanned free balloons and remotely piloted aircraft.

4.3. NATIONALITY AND REGISTRATION MARKS

4.3.1.1.—(*a*) This Subpart prescribes the requirements for the identification and marking of civil aircraft registered in Nigeria. Applicability.

4.3.1.2.—(*a*) No person may operate a civil aircraft registered in Nigeria unless it displays nationality and registration marks in accordance with the requirements of this section. The letter or letters used to identify the aircraft nationality as of Nigeria shall conform to the requirements outlined in *Annex* 7 to the Convention on International Civil Aviation. This is to be followed by a hyphen and series of numbers or letters assigned by the Authority. General.

(*b*) Unless otherwise authorized by the Authority, no person may place on any aircraft a design, mark, or symbol that modifies or confuses the nationality and registration marks. Marks shall not be used which might be confused with the International Five Letter Code of Signals, Part II, the three-letter combinations beginning with Q used in the Q Code or Distress Codes or other similar, urgent codes.

(*c*) Permanent marking of aircraft nationality and registration shall—

(1) Be painted on the aircraft or affixed by other means insuring a similar degree of permanence ;

(2) Have no ornamentation ;

(3) Contrast in color with the background ;

(4) Be legible ; and

(5) Be kept clean and visible at all times.

4.3.1.3.—(*a*) Each owner shall display on that aircraft marks consisting of the Roman capital letter "N" preceded by the number five (5), followed by the registration mark of the aircraft in Arabic numerals, Roman capital letters, or a combination thereof, assigned by the Authority upon registration of the aircraft. Display of Marks : General.

(*b*) No person shall operate an aircraft in Nigeria unless it displays on that aircraft marks consisting of the Roman capital letter(s), denoting nationality of the State of Registry, followed by the registration mark of the aircraft in Arabic numerals, Roman capital letters, or a combination thereof.

4.3.1.4.—(*a*) No person shall operate an aircraft unless it displays marks on the aircraft meeting the size requirements of this section. Size of Marks.

(*b*) *Height.*—The character marks shall be of equal height and on—

(1) Heavier-than-air aircraft shall be at least :

(*i*) 50 centimeters high if on the wings, and

(*ii*) 30 centimeters high if on the fuselage (or equivalent structure) and vertical tail surfaces ; or

(iii) Identified readily if the aircraft processes no wings and fuselage.

(2) Lighter-than-air aircraft other than unmanned free balloons shall be at least 50 centimeters high.

(3) The character marks of unmanned free balloons and other lighter-than-air aircraft that is not of sufficient size to accommodate marks of at least 50 centimeters high shall be determined by [Director of the Registry or Authority], taking into account the size of the payload to which the identification plate is affixed.

(*c*) *Width.*—Characters shall be two-thirds as wide as they are high, except the number "1" and the letter "I", which shall be one-sixth as wide as it is high. The length of hyphens shall be two-thirds as long as the character is high.

(*d*) *Thickness.*—Characters and hyphens shall be formed by solid lines one-sixth as thick as the character is high and shall be of a colour contrasting clearly with the background.

(*e*) *Spacing.*—The space between each character may not be less than one-fourth of a character width. A hyphen shall be regarded as a character for this purpose.

(*f*) *Uniformity.*—The marks required by this Part for fixed-wing aircraft must have the same height, width, thickness, and spacing on both sides of the aircraft.

Location of Marks on Heavier-than-air Aircraft.

4.3.1.5.—(*a*) No person shall operate a fixed-wing aircraft unless it displays the marks once on the lower surface of the wing structure as follows :

(1) They shall be located on the left half of the lower surface of the wing structure unless they extend across the whole of the lower surface of the wing structure.

(2) So far as is possible, the marks shall be located equidistant from the leading and trailing edge of the wings.

(3) The tops of the letters and numbers shall be toward the leading edge of the wing.

(*b*) On a heavier than air aircraft with a fuselage (or equivalent structure) and/or upper halves of the vertical tail surface, the marks shall appear on either the vertical tail surfaces or the sides of the fuselage as follows :

(1) If displayed on the vertical tail surfaces, horizontally on both surfaces of a single vertical tail or on the outer surfaces of a multi-vertical tail.

(2) If displayed on the fuselage surfaces, horizontally on both sides of the fuselage between the trailing edge of the wing and the leading edge of the horizontal stabilizer.

(3) If engine pods or other appurtenances are located in the area described in paragraph (*b*)(2) and are an integral part of the aircraft, the marks may appear on those pods or appurtenances.

Location of Marks on Lighter-Than-Air Aircraft.

4.3.1.6.—(*a*) *Airships*—No person shall operate an airship unless it displays marks on—

(1) The hull, located lengthwise on each side of the hull and on its upper surface on the line of symmetry ; or

(2) The horizontal and vertical stabilizers surfaces—

(*i*) For the horizontal stabilizer, located on the right half of the upper surface and on the left half of the lower surface, with the tops of the letters and numbers toward the leading edge ; and

(*ii*) For the vertical stabilizer, located on each side of the bottom half stabilizer, with the letters and numbers placed horizontally.

(*b*) *Spherical Balloons* (other than unmanned free balloons)—No person shall operate a spherical balloon unless it displays marks in two places diametrically opposite each other and located near the maximum horizontal circumference of the balloon.

(*c*) *Non-spherical Balloons* (other than unmanned free balloons)—No person shall operate a non-spherical balloon unless it displays marks on each side, located near the maximum cross section of the balloon immediately above either the rigging band or the points of attachment of the basket suspension cables.

(*d*) *Lighter-than-air Aircraft* (other than unmanned free balloons)—No person shall operate any lighter-than-air aircraft other than unmanned free balloons unless it displays marks visible both from the sides and from the ground.

(*e*) *Unmanned Free Balloons*—No person shall operate any unmanned free balloon unless is displays marks on the identification plate.

Special cases for Size and Location of Marks.

4.3.1.7.—(*a*) If either one of the surfaces authorised for displaying required marks is large enough for display of marks meeting the size requirements of this section and the other is not, the full-size marks shall be placed on the larger surface.

(*b*) If neither surface is large enough for full-size marks, the Authority may approve marks as large as practicable for display on the larger of the two surfaces.

(*c*) If, because of the aircraft configuration, it is not possible to mark the aircraft in accordance with this Part, the owner may apply to the Authority for a different procedure.

Sale of Aircraft : Removal of Marks.

4.3.1.8.—(*a*) When an aircraft that is registered in Nigeria is sold, the holder of the certificate of registration shall remove, before its delivery to the purchaser, all nationality and registration marks of Nigeria, unless the purchaser is a citizen or other legal entity as prescribed in 4.2.1.2*(a)*(1).

Identification Plate Required.

4.3.1.9.—(*a*) No person shall operate an aircraft registered under the laws of Nigeria unless an identification plate is affixed to it—

(1) Containing the aircraft type, model, serial number, marks of nationality and registration mark.

(2) Made of fireproof metal or other fireproof material of suitable physical properties.

(3) Secured to the aircraft—

(*i*) in a prominent position near the main entrance ; or

(*ii*) in the case of an unmanned free balloon, affixed conspicuously to the exterior of the payload ; and

(*iii*) in the case of a remotely piloted aircraft, secured in a prominent position near the main entrance or compartment or affixed conspicuously to the exterior of the aircraft if there is no main entrance or compartment.

(*b*) The registration mark (number) on the identification plate will need to be changed each time the aircraft registration changes.

NIGERIA CIVIL AVIATION REGULATIONS

Part 4—Implementing Standards

NIGERIAN CIVIL AVIATION AUTHORITY

Certificate Number

CERTIFICATE OF REGISTRATION OF AIRCRAFT

1. Nationality and Registration Marks.	2. Manufacturer and Manufaturer's Designation of aircraft.	3. Aircraft Serial Number.
		4. Date of Manufacture.
5. Name of Registered Operator		
6. Address of Operator		
7. Name and Address of Owner		

8. It is hereby certified that the above described Aircraft has been duly entered on the Register of the Federal Republic of Nigeria in accordance with the Convention on International Civil Aviation dated 7th December, 1944, and with the Civil Aviation Act, 2006 and the Regulations issued thereunder.

9. Date of Issue ____________

____

by Authority of the Nigeria Civil Aviation

Note : 1. No entries or endorsements may be made in the foregoing certifcite except in the manner and by the persons authorised for that purpose.

2. This Certificate must be displayed aboard the Aircraft.

3. This Certificate is not transferable.

IMPORTANT

PLEASE READ CAREFULLY

This certificate is issued for registration purposes only and is not a certificate of title. The Nigerian Civil Aviation Authority does not determine rights of ownership between private persons.

On any change in the ownership of aircraft, the aircraft, *the registration and certificate become void* from the date of the change and the documents must be returned IMMEDIATELY to the issuing authority with the appropriate section duly completed. This certificate must not be handed over to the new owner. Similar action is also required if the aircraft is destroyed or permanently withdrawn from use.

When the registration has become void, the aircraft may not again be flown until a new Certificate of Registration has been obtained. Any application for re-registration of the aircraft shall be made on the prescribed form, copies of which may be obtained from issuing authority.

SECTION I—NOTICE OF CHANGE OF OWNERSHIP

I hereby notify that, with effect from the .... Day of .... 20............ the ownership of the aircraft described overleaf was transferred to : ....
....

(*Fill in name and address of new owner*)

Name : ___________________________ Designation : ___________________________

* Signature : ______________________ Date : _________________________________

SECTION II—NOTICE THAT AIRCRAFT HAS BEEN DESTROYED OR PERMANENTLY WITHDRAWN FROM USE

I hereby notify that the registration of the aircraft described overleaf should be cancelled by reason of :

+(a) the aircraft having been destroyed ;

+(b) the aircraft having ben parmantly withdrawn from use.

Name : ___________________________ Designation : ___________________________

* Signature : ______________________ Date : _________________________________

SECTION III: NOTICE OF ANY OTHER CHANGE AFFECTING THE REGISTRATION OF THE AIRCRAFT (CHANGE OF OPERATOR, ETC)

I hereby notify that the registration of the aircraft described overlead should be cancelled by reason of ....

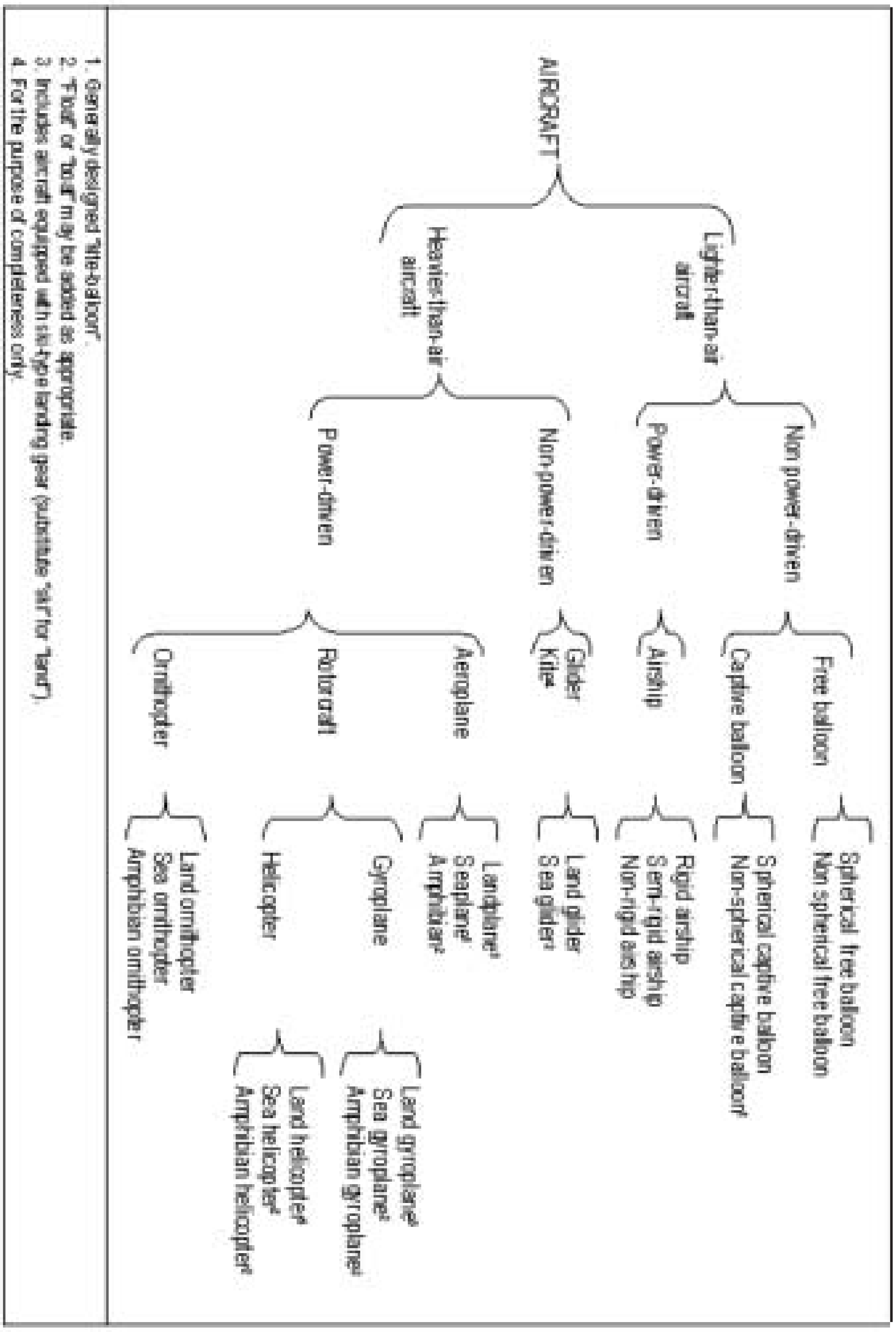
Name : ___________________________ Designation : ___________________________

* Signature : ______________________ Date : _________________________________

* The signature required is that of the owner(s) as shown in this Certificate of Registration. If the owner is a body corporate, the signature shall be that of the Managing Director, Secretary, or other official duly authorised to sign under the seal of the Company.

+ Delete if not applicable

IS 4.2.1.8. CLASSIFICATION OF AIRCRAFT



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NIGERIA CIVIL AVIATION REGULATIONS

PART 5—AERODROME REGULATIONS

INTRODUCTION

Nigeria does not presently have the capabilities or demand to issue its own original type certification and will therefore not be the State of Design or State of Manufacture. Part 5 of the Regulations presents regulatory requirements for the continuing airworthiness of aircraft expected to operate in Nigeria consistent with the standards and recommended practices (SARPs) in ICAO *Annexes* 6 and 8. Part 5 is designed to address the complex situation faced by most countries today respecting the airworthiness of aircraft operating within the country and in international aviation. In most such cases, there are aircraft registered in Nigeria that were designed and manufactured in another Contracting State, and aircraft registered in Nigeria that were designed in one Contracting State and manufactured in another Contracting State. In addition, Nigeria may have AOC holders who operate aircraft registered in another Contracting State, with different States of design and manufacture. Additionally, Nigeria may have AOC holders who are part of a regional consortium, with maintenance facilities in a neighboring State. Proper airworthiness of aircraft registered in Nigeria is the result of communication. The Regulations require all persons operating Nigerian registered aircraft to notify the Authority when certain events occur. The Authority is required to open lines of communication with the State of Design and/or the State of Manufacture, so that the Authority can receive all safety bulletins and airworthiness directives for each type of aircraft operating in Nigeria.

NIGERIA CIVIL AVIATION REGULATION

PART 5—AIRWORTHINESS

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S.I. No. 36 of 2015

NIGERIA CIVIL AVIATION REGULATION

PART 5—AIRWORTHINESS

5.1. General.

Applicability.

5.1.1.1—(*a*) This Regulation prescribes the requirements for—

(1) Original Certification of Aircraft and Aeronautical Products ;

(2) Supplemental Type Certificates ;

(3) Issuance of a Certificate of Airworthiness ;

(4) Continued Airworthiness of Aircraft and Aeronautical Components ;

(5) Aircraft Maintenance and Inspection Requirements ; and

(6) Maintenance Records and Entries.

Definitions.

5.1.1.2—*(a)* For the purpose of Part 5 the following definition shall apply.—

(1) *Aeronautical Product.* Any Aircraft, Aircraft engine, propeller or subassembly, appliance, material, part or component to be installed thereon.

(2) *Airworthiness Approval Tag* (NCAA Form). A tag (NCAA Form One) that may be attached to a part. The tag must include the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, a new tag must be created or the existing tag must be updated with the current life status. NCAA Form One has two distinct purposes— (1) is as a certification of release to service of a part, component or assembly after maintenance, preventive maintenance, overhaul or rebuilding and (2) the other is as shipping of a newly manufactured part.

(3) *Airworthiness Directive.*— Continuing Airworthiness information that applies to the following products : Aircraft, aircraft engines, propellers and appliances. An airworthiness directive is mandatory if issued by the state of Design.

(4) *Modification.*— The modification of an aircraft/aeronautical product in conformity with an approved standard.

(5) *Appropriate Airworthiness Requirements.* The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting state for the class of aircraft, engine or propeller under consideration.

(6) *Certificate of Airworthiness.* A certificate, issued by the State of registry, when the aircraft has been deemed fit and safe for flight and in conformity with the type design approved by the State of Design and maintained in accordance with the continuing Airworthiness requirements of the State of Registry.

(7) *Continuing Airworthiness.* The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

(8) *Life-limited Part.*—Any part for which a mandatory replacement limit is specified in the type design, the instructions for Continued Airworthiness or the maintenance manual.

(9) *Maintenance.* The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

(10) *Major modification.* In respect of an aeronautical product for which a type certificate has been issued, a change in the type design that has an appreciable effect, or other than a negligible effect, on the mass and balance limits, structural strength, powerplant operation, flight characteristics, reliability, operational characteristics, or other characteristics or qualities affecting the airworthiness or environmental characteristics of an aeronautical product. IS: 5.1.1.2(*a*)(8)

(11) *Major repair.* Major repair means a repair: (1) that if improperly done might appreciably affect weight, balance, structural strength, performance, powerplant, operations, flight characteristics, or other qualities affecting airworthiness; or (2) that is not done according to accepted practices or cannot be done by elementary operations. Described in IS: 5.1.1.2(*a*)(9).

(12) *Minor modification.* A modification other than a major modification

(13) *Overhaul.* The restoration of an aircraft/aeronautical product using methods, techniques, and practices acceptable to the authority, including disassembly, cleaning, and inspection as permitted, repair as necessary, and reassembly; and tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the authority, which have been developed and documented by the state of design, holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under a technical standard order (TSO).

(14) *Preventive maintenance.* Simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations. Described in IS: 5.1.1.2(*a*)(11).

(15) *Rebuild.* The restoration of an aircraft/aeronautical product by using methods, techniques, and practices acceptable to the authority, when it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.

(16) *Repair.*—(1) the restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements. (ICAO *annex* 8 definition) ;

(2) the restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear. (ICAO *annex* 6 definition).

(17) *Required inspection items.* Maintenance items and/or modifications that must be inspected by a qualified and authorised person other than the one performing the work, and include at least those that could result in a failure, malfunction, or defect endangering the safe operation of the aircraft, if not properly performed or if improper parts or materials are used.

(18) *State of design.* The state having jurisdiction over the organisation responsible for the type design.

(19) *State of manufacture.* The state having jurisdiction over the organisation responsible for the final assembly of the aircraft.

(20) *State of registry.* The state on whose register the aircraft is entered.

(21) *Type certificate.* A document issued by a contracting state to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that state.

(22) *Validation of a certificate of airworthiness.* The action taken by a contracting state, as an alternative to issuing its own certificate of airworthiness, in accepting a certificate of airworthiness issued by any other contracting state as the equivalent of its own certificate of airworthiness.

5.1.1.3—(*a*) The following acronyms are used in part 5 : Abbreviations.

(1) AOC - Air Operator Certificate

(2) AMO - Approved Maintenance Organisation

(3) AME - Aircraft Maintenance Engineer

(4) IA - Inspection Authorisation

(5) MEL - Minimum Equipment List

(6) PIC - Pilot In Command

(7) STC - Supplemental Type Certificate

(8) TSO - Technical Standard Order

5.2 Original Certification of Aircraft and Aeronautical Products

5.2.1.1—(*a*) This part applies to operators of aircraft within Nigeria ;

(*b*) No person may operate an aircraft within Nigeria, or apply for registration of an aircraft in Nigeria, unless that aircraft and the aeronautical products therein have received type certification from the state of design and production approval from the state of manufacture by the appropriate regulatory agency of those states in accordance with the requirements of ICAO *annex* 8.

(*b*)(*c*) *No person may operate a non-type certificated aircraft within Nigeria, or apply for registration of a non-type certificated aircraft in Nigeria, unless that aircraft and the aeronautical products therein have received a certification or approval from the state of design by the appropriate regulatory agency of the state in accordance with the requirements acceptable to the authority.*

Original Certification of Aircraft and Aeronautical Products.

5.2.1.2.—(1) This subpart describes the procedures and designation of applicable rules for original type certification of aircraft and related aeronautical products.

(2) This subpart is reserved.

5.3. TYPE CERTIFICATES AND SUPPLEMENTAL TYPE CERTIFICATES

Applicability.

5.3.1.1.—(*a*) This subpart prescribes procedural requirements for the acceptance of a type certificate and the issue of supplemental type certificates.

Acceptance of a type Certificate

5.3.1.2.—(*a*) The authority may accept a type certificate or equivalent document issued by a state of design in respect of an aircraft or aircraft component if :

(1) The type certificate or equivalent document was issued based on an airworthiness code recognized by the authority ; or

(2) The design, materials, construction equipment, performance and maintenance of aircraft or aircraft component technical evaluation against a recognized airworthiness code has been carried out by the authority and has been found to:

(*i*) Meet the required standards of the recognized airworthiness code ; or

(*ii*) Has compiled with any recommendations required by the authority.

(*b*) Upon acceptance of the type certificate by the authority, the authority may, prior to issue of standard or special certificate of airworthiness, require the applicant to comply with any additional requirements as prescribed by the authority.

(*c*) In this regulation, recognised airworthiness code means standards relating to the design, materials, construction equipment, performance and maintenance of aircraft or aircraft component issued by the states of design are in compliance with annex 8 to the chicago convention.

Issuance of a Supplementary Certificate.

5.3.1.3.—(*a*) Any person who proposes to modify a product by introducing a major change in type design, not great enough to require a new application for a type certificate, shall apply for a supplemental type certificate to the regulatory agency of the state of design that approved the type certificate for that product, or to the state of registry of the aircraft provided that the state of registry has the technical expertise to evaluate the proposed change in accordance with the type design. The applicant shall apply in accordance with the procedures prescribed by that state.

(*b*) The authority, upon receiving a request for a supplemental type certificate for an aircraft registered in Nigeria.

(1) shall forward the request to the state of design or

(2) if applicable, issue a supplemental type certificate using the same regulatory and other guidance of the state of design and state of manufacture.

Acceptance of a Non-type Certificated Aircraft.

5.3.1.4.—(*a*) The authority may accept a non-type certificated aircraft document issued by a state of design in respect of an aircraft or aircraft component if :

(1) The non-type certificated aircraft document was issued based on an airworthiness code acceptable by the authority ; or

(2) The design, materials, construction equipment, performance and maintenance of aircraft or aircraft component technical evaluation against the accepted airworthiness code has been carried out by the authority and has been found to :

(*i*) meet the required standards of the accepted airworthiness code ; or

(*ii*) Has compiled with any recommendations required by the authority.

(*b*) Upon acceptance of the non-type certificated aircraft document by the authority, the authority may, prior to issue of a special certificate of airworthiness, require the applicant to comply with any additional requirements as prescribed by the authority.

(*c*) In this regulation, accepted airworthiness code means standards relating to the design, materials, construction equipment, performance and maintenance of aircraft or aircraft component issued by the states of design and accepted by the authority

5.4. Issuance of Certificates of Airworthiness

Applicability.

5.4.1.1.—(*a*) This subpart prescribes procedures required for the issue of airworthiness certificates and other certifications for aeronautical products registered in Nigeria.

(*b*) The authority shall issue a certificate of airworthiness for aircraft registered in Nigeria based on satisfactory evidence that the aircraft complies with the design aspects of the appropriate airworthiness requirements (type certificate) and is in a condition for safe operation.

Eligibility.

5.4.1.2.—(*a*) Any registered owner of Nigerian registered aircraft, or agent of the owner, may apply for an airworthiness certificate for that aircraft.

(*b*) Each applicant for an airworthiness certificate shall apply in a form and manner acceptable to the authority.

Aircraft Identification.

5.4.1.3.—(*a*) Each applicant for a certificate of airworthiness shall show that the aircraft has the proper identification plates.

Classifications of Aircraft Worthiness Certificates.

5.4.1.4—(*a*) A standard certificate of airworthiness will be issued for aircraft in the specific category and model designated by the state of design in the type certificate. The types of standard certificates of airworthiness include—

(1) Normal ;

(2) Utility ;

(3) Acrobatic ;

(4) Transport ;

(5) Commuter ;

(6) Balloon ;

(7) Other.

(*b*) A special airworthiness certificate will be issued for aircraft that do not meet the requirements of the state of design for a standard airworthiness certificate. The types of special airworthiness certificates include-

(1) Primary ;

(2) Restricted ;

(3) Limited ;

(4) Provisional

(5) Experimental

(6) Special flight permits ;

(7) Other.

Issuance of Validation of a Standard Airworthiness Certificate.

5.4.1.5—(*a*) The authority will issue a standard certificate of airworthiness if—

(1) The applicant presents evidence to the authority that the aircraft conforms to a type design approved under a type certificate or a supplemental type certificate and to the applicable airworthiness directives of the state of design ;

(2) The aircraft has been inspected in accordance with the performance rules of section 5.6 of this regulation for inspections and found airworthy by persons authorised by the authority to make such determinations within the last 30 calendar days ; and

(3) The authority finds after an inspection that the aircraft conforms to type design and is in condition for safe operation.

(*b*) The authority may validate a certificate of airworthiness issued by another contracting state upon registration of the aircraft in Nigeria for the period specified in that validation certificate. The validation certificate shall be carried with the certificate of airworthiness and, together, shall be considered as the equivalent of a certificate of airworthiness issued by the authority. The validity of the validation certificate shall not extend beyond the period of validity of the certificate of airworthiness or one year, whichever is less.

(*c*) The standard airworthiness certificate shall contain the information in IS: 5.4.1.5

(*d*) The standard airworthiness certificate or validation certificate shall be issued in the English language.

Issuance of Special Air-Worthiness Certificate.

5.4.1.6—(*a*) The authority may issue a special airworthiness certificate to the aircraft that does not qualify for a standard certificate of airworthiness.

(*b*) The authority, when issuing its special airworthiness certificate, may consider the previous special airworthiness certificate, issued by another contracting state, as satisfactory evidence, in whole or in part, for the issuance of a special airworthiness certificate.

(*c*) Aircraft holding special airworthiness certificates shall be subject to operating limitations within nigeria and may not make international flights except as specified in (*d*) below. The authority shall issue specific operating limitations for each special airworthiness certificate.

(*d*) The special airworthiness certificate shall contain the information in IS: 5.4.1.6.

(*e*) No person may operate an aircraft with a special airworthiness certificate

(1) Except in accordance with the applicable nig.cars and in accordance with conditions and limitations which may be prescribed by the authority as part of this certificate, or

(2) Over any foreign country without the permission of that country

Issuance of Special Flight Permits as Special Air-Worthiness Certificates.

5.4.1.7—*(a)* The authority may issue a special flight permit using the certificate as specified in IS 5.4.1.6 to an aircraft that is capable of safe flight, but unable to meet applicable airworthiness requirements, for the purpose of-

(1) Flying to a base where repairs, modifications, maintenance, or inspections are to be performed, or to a point of storage ;

(2) Testing after repairs, modifications, or maintenance have been performed ;

(3) Delivering or exporting the aircraft ;

(4) Evacuating aircraft from areas of impending danger ; and

(5) Operating at weight in excess of the aircraft's maximum certified takeoff weight for flight beyond normal range over water or land areas where adequate landing facilities or appropriate fuel is not available. The excess weight is limited to additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight.

(*b*) The authority may issue a special flight permit with continuing authorisation issued to an aircraft that may not meet applicable airworthiness requirements but are capable of safe flight, for the purpose of flying aircraft to a base where maintenance or modifications are to be performed. The permit issued under this paragraph is an authorisation, including conditions and limitations for flight, which is set forth in the AOC holder's specific operating provisions. This permit under this paragraph may be issued to an aoc holder certificated under Part 9.

(*c*) In the case of special flight permits, the authority shall require a properly executed maintenance endorsement in the aircraft permanent record by a person or organisation, authorised in accordance to Part 5, stating that the subject aircraft has been inspected and found to be safe for the intended flight.

(*d*) The operator shall obtain all required overflight authorisations from countries to be overflown on flights outside Nigeria.

Duration of Certificates of Airworthiness.

5.4.1.8 (*a*) A certificate of airworthiness or special airworthiness certificate is effective as follows unless sooner surrendered, suspended or revoked, or a special termination date is otherwise established by the authority-

(1) A transport certificate of airworthiness shall be valid for a period not to exceed eighteen months, as determined by the authority. All other standard certificates of airworthiness shall be valid for a period not to exceed twelve months, as determined by the authority.

(2) The validity of a validation certificate issued by nigeria shall not extend beyond the period of validity of the certificate of airworthiness on which the nigerian validation certificate is based, or twelve months, whichever is less.

(3) A special airworthiness certificate, such as a special flight permit, is valid for the period of time specified in the permit, which in any case shall not exceed twelve months.

(*b*) A certificate of airworthiness shall be renewed or shall remain in effect,

(1) As long as the aircraft is maintained in accordance with the continuing airworthiness requirements of the state of registry ;

(2) Until sold to a person outside of Nigeria ;

(3) Until the aircraft is leased for operations, registered in another country, and is removed from the registry of Nigeria, or

(4) Revoked by the state of registry.

(*c*) The continuing airworthiness of the aircraft shall be determined by a periodical inspection at appropriate intervals having regard to lapse of time and type of service.

(*d*) Failure to maintain an aircraft in an airworthy condition as defined by the appropriate airworthiness requirements of the state of registry shall render the aircraft ineligible for operations until the aircraft is restored to an airworthy condition.

Cooperation among States for Continuing.

5.4.1.9—(*a*) Upon registration of an aircraft in Nigeria, the authority will notify the state of design of the aircraft of the registration in nigeria, and request that the authority receives any and all airworthiness directives addressing that aircraft, airframe, aircraft engine, propeller, appliance, or component part and any requirements for the establishment of specific continuing airworthiness programs.

(*b*) Whenever the state of design considers that a condition in an aircraft, airframe, aircraft engine, propeller, appliance, or component part is unsafe as shown by the issuance of an airworthiness directive by that state, the authority will make the requirements of such directives apply to Nigerian registered civil aircraft of the type identified in that airworthiness directive.

(*c*) The authority may identify manufacturer's service bulletins and other sources of data, or develop and prescribe inspections, procedures and limitations, for mandatory compliance pertaining to affected aircraft in Nigeria.

(*d*) No person may operate any Nigerian registered civil aircraft to which the measures of this subsection apply, except in accordance with the applicable airworthiness directives and service bulletins.

Amendment of Airworthiness Certificate.

5.4.1.10—(*a*) The authority may amend or modify a certificate of airworthiness or a special airworthiness certificate

(1) Upon application from an owner or operator ; or

(2) On its own initiative.

` *(b)* Amendment may be made under the following conditions:

(1) Modification (STC or amended TC) ;

(2) A change to the authority and basis for issue ;

(3) A change in the aircraft model ; or

(4) A change in the operating limitations for an aircraft with a special airworthiness certificate.

Transfer or Surrender of a Certificate of Airworthiness.

5.4.1.11—(a) An owner shall transfer a certificate of airworthiness—

(1) To the lessee upon lease of an aircraft within or outside Nigeria.

(2) To the buyer upon sale of the aircraft within Nigeria.

(b) An owner shall surrender the certificate of airworthiness for the aircraft to the issuing authority upon sale of that aircraft outside of Nigeria that results in the removal of the aircraft from the Nigerian registry.

Commercial Air Transport.

5.4.1.12—(*a*) The authority will consider an airworthiness certificate valid for commercial air transport only when accompanied by operations specifications issued by the authority which identifies the specific types of commercial air transport authorised.

Display of Certificate of Airworthiness.

5.4.1.13—(*a*) No person may operate a civil aircraft in Nigeria or registered in Nigeria unless the certificate of airworthiness required by this subpart, or a special flight permit, is displayed at the cabin or cockpit entrance so that it is legible to the passengers or crew.

Aircraft Limitations and Information.

5.4.1.14 Each aircraft shall be provided with a flight manual, placards or other documents stating the approved limitations within which the aircraft is considered airworthy as defined by the appropriate airworthiness requirements and additional instructions and information necessary for the safe operation of the aircraft.

Export Airworthiness Approvals.

5.4.1.15—(*a*) Aircraft which are to be exported will be issued with a certificate of airworthiness for export as prescribed in IS 5.4.1.15.

(*b*) The certificate of airworthiness for export does not permit the flight of the particular aircraft. Before the aircraft is flown, the certificate must be validated by the state of registry or replaced by a certificate of airworthiness issued by that state of registry.

(*c*) Export approval for class 1 (other than whole aircraft), class 2 and 3 aeronautical products may be issued as prescribed by the authority.

Damage to Aircraft.

5.4.1.16—(*b*) When an aircraft has sustained damage, the authority shall judge whether the damage is of a nature such that the aircraft is no longer airworthy as defined by the appropriate airworthiness requirements.

(*c*) If the damage is sustained or ascertained when the aircraft is in the territory of another contracting state, the authorities of the other contracting state shall be entitled to prevent the aircraft from resuming its flight on the condition that they shall advise the authority immediately, communicating to it all details necessary to formulate the judgment referred to in 5.4.1.16*(a).*

(*d*) When the authority considers that the damage sustained is of a nature such that the aircraft is no longer airworthy, it shall prohibit the aircraft from resuming flight until it is restored to an airworthy condition. The authority may, however, in exceptional circumstances, prescribe particular limiting conditions to permit the aircraft to fly a noncommercial air transport operation to an aerodrome at which it will be restored to an airworthy condition. In prescribing particular limiting conditions the authority shall consider all limitations proposed by the contracting state that had originally, in accordance with 5.4.1.16(*b*), prevented the aircraft from resuming its flight. That contracting state shall permit such flight or flights within the prescribed limitations.

(*e*) When the authority considers that the damage sustained is of a nature such that the aircraft is still airworthy, the aircraft shall be allowed to resume its flight.

Applicability.

5.5 CONTINUED AIRWORTHINESS OF AIRCRAFT AND AERONAUTICAL COMPONENTS

5.5.1.1—(*a*) This subpart prescribes rules governing the continued airworthiness of civil aircraft registered in Nigeria whether operating inside or outside the borders of Nigeria.

5.5.1.2— (*a*) The registered owner or operator of an aircraft or, in the case of a leased aircraft, the lessee shall be responsible for maintaining the aircraft in an airworthy condition by ensuring that-

(1) All maintenance, overhaul, modifications and repairs which affect airworthiness are performed as prescribed by the state of registry ;

(2) Maintenance personnel make appropriate entries in the aircraft maintenance records certifying that the aircraft is airworthy ;

(3) The approval for return to service (maintenance release) is completed to the effect that the maintenance work performed has been completed satisfactorily and in accordance with the prescribed methods ; and

(4) In the event there are open discrepancies, the maintenance release includes a list of the uncorrected maintenance items for which temporary relief of provided in the mel and these items are made a part of the aircraft permanent record.

(5) The operational and emergency equipment necessary for an intended flight is serviceable ; and

(6) The certificate of airworthiness of the aircraft remains valid.

(7) When the maintenance release is not issued by an approved maintenance organization in accordance with Nig. Cars part 6, the person signing the maintenance release shall be licensed in accordance with Nig. Cars part 2.

(*b*) The owner or operator of an aeroplane over 5, 700 kg and helicopter over 3,175kg maximum certificated take-off mass shall obtain and assess continuing airworthiness information and recommendations available from the organisation responsible for the type design and shall implement resulting actions considered necessary in accordance with a procedure acceptable to the authority.

5.5.1.3—(*a*) No person may perform maintenance, preventive maintenance, or modifications on an aircraft other than as prescribed in this regulation. General.

(*b*) No person may operate an aircraft for which a manufacturer's maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitation section unless the mandatory replacement times, inspection intervals, and related procedures specified in that section or alternative inspection intervals and related procedures set forth in the operations specifications approved under part 9, or in accordance with the inspection program approved under part 8 have been complied with.

(*c*) No person may operate an aircraft, aeronautical product, or accessory to which an airworthiness directive applies, issued either by the state of design, or state of manufacture and adopted for Nigerian-registered aircraft by the authority, or by the state of registry for aircraft operated within Nigeria, except in accordance with the requirements of that airworthiness directive.

(*d*) when the authority determines that an airframe or aeronautical product has exhibited an unsafe condition and that condition is likely to exist or to develop in other products of the same type design, the authority may issue an airworthiness directive prescribing inspections and the conditions and limitations, if any, under which those products may continue to be operated.

(*e*) The authority shall report any airworthiness directives or continuing additional airworthiness requirements that it issues or any malfunction or defect reports to the state of design.

Maintenance and operational experience.

5.5.1.4—(*a*) The owner or operator of an aeroplane over 5, 700 kg and helicopter over 3,175kg maximum certificated take-off mass shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and have a system whereby information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft is transmitted to the organisation responsible for the type design of the aircraft.

(*b*) The owner or operator and maintenance organisations shall report to the authority in respect of aeroplanes over 5,700 kg and helicopters over 3,175 kg maximum certificated take-off mass the service information required by the authority according to the procedure, established by the authority.

(*c*) The owner or operator and maintenance organisations shall transmit to the organisation responsible for the type design of aircraft respect of aeroplanes over 5,700 kg and helicopters over 3,175 kg maximum certificated take-off mass information on faults, malfunction, defects and other occurrences that cause or might cause adverse effect on the continuing airworthiness of the aircraft.

Reporting of failures, malfunctions and defects.

5.5.1.5—(*a*) Owners or operators of aircraft over 5,700 kg maximum take-off weight or of any aircraft used in a commercial operation shall report to the authority any failures, malfunctions, or defects that result in at least the following-

(1) Fires during flight and whether the related fire-warning system properly operated ;

(2) Fires during flight not protected by a related fire-warning system;

(3) False fire warning during flight ;

(4) An engine exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components ;

(5) An aircraft component that causes accumulation or circulation of smoke, vapour, or toxic or noxious fumes in the crew compartment or passenger cabin during flight ;

(6) Engine shutdown during flight because of flameout ;

(7) Engine shutdown during flight when external damage to the engine or aircraft structure occurs ;

(8) Engine shutdown during flight due to foreign object ingestion or icing;

(9) Shutdown during flight of more than one engine ;

(10) A propeller feathering malfunction or inability of the system to control overspeed during flight ;

(11) A fuel or fuel-dumping system failure that affects fuel flow or causes hazardous leakage during flight ;

(12) An unintended landing gear extension or retraction, or opening or closing of landing gear doors during flight ;

(13) Brake system components failure that result in loss of brake actuating force when the aircraft is in motion on the ground ;

(14) Aircraft structure that requires major repair ;

(15) Cracks, permanent deformation, or corrosion of aircraft structure, if more than the maximum acceptable to the manufacturer or the authority ;

(16) Aircraft components or systems malfunctions that result in taking emergency actions during flight (except action to shut down an engine) ;

(17) Each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route, caused by known or suspected technical difficulties or malfunctions ;

(18) Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure ; and

(19) A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.

(b) Owners or operators of aircraft over 5,700 kg maximum take-off weight or of any aircraft used in a commercial operation shall report to the authority—

(1) The number of engines removed prematurely because of malfunction, failure or defect, listed by make and model and the aircraft type in which it was installed ; and

(2) The number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed.

(c) Each report required by this subsection shall—

(1) Be made within 3 days after determining that the failure, malfunction, or defect required to be reported has occurred ; and

(2) Include as much of the following information as is available and applicable-

(*i*) Aircraft serial number ;

(*ii*) When the failure, malfunction, or defect is associated with an article approved under a TSO authorisation, the article serial number and model designation, as appropriate ;

(*iii*) When the failure, malfunction or defect is associated with an engine or propeller, the engine or propeller serial number, as appropriate ;

(*iv*) Product model ;

(*v*) Identification of the part, component, or system involved, including the part number ; and

(*vi*) Nature of the failure, malfunction, or defect.

(*d*) The authority, if it is the authority of the state of registry of the aircraft, will submit all such reports upon receipt to the state of design.

(*e*) The authority, if it is not the authority of the state of registry of the aircraft, will submit all such reports upon receipt to the state of registry.

Aircraft Mass Schedule.

5.5.1.6—(*a*) Every aircraft in respect of which a certificate of airworthiness is issued or rendered valid under this part shall be weighed, and the position of its centre of gravity determined, at such times and in such manner as the authority may require or approve in the case of that aircraft.

(*b*) Upon the aircraft being weighed as aforesaid, the operator of the aircraft shall prepare a mass schedule showing :

(*i*) Either the basic mass of the aircraft, that is to say, the mass of the aircraft empty together with mass of unusable oil in the schedule, or such other mass as may be approved by the authority in the case of that aircraft ; and

(*ii*) Either the position of the centre of gravity of the aircraft when the aircraft contains only the items included in the basic mass or such other position of the centre of gravity as may be approved by the authority in the case of that aircraft.

(*c*) The mass schedule shall be preserved by the operator of the aircraft until the expiration of a period of 6 month following the next occasion on which the aircraft is weighed for the purpose of this sub-section.

5.6 Aircraft Maintenance and Inspection Requirements

Applicability.

5.6.1.1—(*a*) This subpart prescribes rules governing the maintenance and inspection of any aircraft having a certificate of airworthiness issued by nigeria or associated aeronautical products.

General requirements for maintenance and inspections.

5.6.1.2—(*a*) No person may operate an aircraft unless the aircraft and its components are maintained in accordance with a maintenance program and the aircraft is inspected according to an inspection program approved by the authority.

(*b*) The maintenance program shall include a description of the aircraft and components and recommended methods for the accomplishment of maintenance tasks. Such information shall include guidance on defect diagnosis.

(*c*) The maintenance program shall include the maintenance tasks and the recommended intervals at which these tasks are to be performed.

(*d*) Maintenance tasks and frequencies that have been specified as mandatory by the state of design in approval of the type design shall be identified in the maintenance program.

(*e*) The maintenance program shall have a maintenance release process, including signed documentation, in a manner satisfactory to the authority, indicating that the maintenance performed has been completed satisfactorily. A maintenance release shall contain a certification including—

(1) Basic details of the maintenance carried out ;

(2) Date such maintenance was completed ;

(3) When applicable, the identity of the approved maintenance organisation, AME, or AOC holder ; and

(4) The identity of the person or persons signing the release.

(f) The owner or operator shall use one of the following inspection programs as appropriate for the aircraft and the type operation.

(1) Annual inspection,

(2) Annual/100 hour inspections,

(3) Progressive, or

(4) Continuous airworthiness maintenance program.

5.6.1.3—(*a*) No person may perform any task defined as maintenance on an aircraft or aeronautical products, except as provided in the following-

(1) A pilot licensed by the authority may perform preventive maintenance on any aircraft owned or operated by that pilot so long as the aircraft is not listed for use by an AOC holder and the maximum certificated takeoff mass does not exceed 2730kg.

(2) A person working under the supervision of an aircraft maintenance engineer, may perform the maintenance, preventive maintenance, and modifications that the supervisory aircraft maintenance engineer is authorised to perform-

(*i*) If the supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly, and

(*ii*) If the supervisor is readily available, in person, for consultation.

(3) A licensed aircraft maintenance engineer may perform or supervise the maintenance or modification of an aircraft or aeronautical product for which he or she is rated subject to the limitation of part 2 of these regulations.

(4) An AMO may perform aircraft maintenance within the limits specified by the authority.

(5) The AOC holder may perform aircraft maintenance as specified by the authority.

(6) A manufacturer holding an AMO may-

(*i*) Rebuild or modify any aeronautical product manufactured by that manufacturer under a type or production certificate ;

(*ii*) Rebuild or modify any aeronautical product manufactured by that manufacturer under a TSO authorisation, a parts manufacturer approval by the state of design, or product and process specification issued by the state of design ; and

(iii) Perform any inspection required by part 8 on aircraft it manufacturers, while currently operating under a production certificate or under a currently approved production inspection system for such aircraft.

Authorised personnel to approve for return to service.

5.6.1.4—*(a)* No person or entity, other than the authority, may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service after it has undergone maintenance, preventive maintenance, rebuilding, or modification, except as provided in the following :

(1) A pilot licensed by the authority may return his or her aircraft to service after performing authorised preventive maintenance.

(2) A licensed aircraft maintenance engineer may approve aircraft and aeronautical products for return to service after he or she has performed, supervised, or inspected its maintenance subject to the limitation of part 2, section 2.4.4 of these regulations.

(3) An amo may approve aircraft and aeronautical products for return to service as provided in the operations specifications approved by the authority.

(4) An AOC holder may approve aircraft and aeronautical products for return to service as specified by the authority.

Persons authorised to perform inspections.

5.6.1.5—*(a)* No person, other than the authority, may perform the inspections required by 8.2.1.7 for aircraft and aeronautical products prior to or after it has undergone maintenance, preventive maintenance, rebuilding, or modification, except as provided in the following :

(1) An aircraft maintenance engineer may conduct the required inspections of aircraft and aeronautical products for which he or she is rated and current.

(2) An AMO may perform the required inspections of aircraft and aeronautical products as provided in the operations specifications approved by the authority.

(3) An AOC holder may perform the required inspections of aircraft and aeronautical products in accordance with specifications issued by the authority.

(b) Required inspection personnel

(1) No person may use any person to perform required inspections unless the person performing the inspection is appropriately certificated, properly trained, qualified, and authorized to do so.

(2) No person may allow any person to perform a required inspection unless, at that time, the person performing that inspection is under the supervision and control of an inspection unit.

(3) No person may perform a required inspection if he performed the item of work required to be inspected.

(4) Each AOC holder shall maintain, or shall determine that each person with whom it arranges to perform its required inspections maintains, a current listing of persons who have been trained, qualified, and authorized to conduct required inspections. The persons must be identified by name, occupational title, and the inspections that they are authorized to perform. The AOC holder (or person with whom it arranges to perform its required inspections) shall give written information to each person so authorized describing the extent of his responsibilities, authorities, and inspectional limitations. The list shall be made available for inspection by the authority upon request.

Performance rules ; Maintenance, Preventive Maintenance or Modification.

5.6.1.6—(*a*) Each person performing maintenance, preventive maintenance, or modification on an aeronautical product shall use the methods, techniques, and practices prescribed in-

(1) The current manufacturer's maintenance manual or instructions for continued airworthiness prepared by its manufacturer and approved by the state of design and/or state of manufacture ; and

(2) Additional methods, techniques and practices required by the authority ; or methods, techniques and practices designated by the authority where the manufacturer's documents were not available.

(*b*) Each person shall use the tools, equipment, and test apparatus necessary to assure completion of the work in accordance with accepted industry practices. If the manufacturer involved recommends special equipment or test apparatus, the person performing maintenance shall use that equipment or apparatus or its equivalent acceptable to the authority.

(*c*) Each person performing maintenance, preventive maintenance, or modification on an aeronautical product shall do that work in such a manner, and use materials of such a quality, that the condition of the aeronautical product worked on will be at least equal to its original or properly modified condition with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness.

(*d*) The methods, techniques, and practices contained in an AOC holder's maintenance control manual and continuous maintenance program, as approved by the authority, will constitute an acceptable means of compliance with the requirements of this subsection.

(*e*) Each person performing required inspections in addition to other maintenance, preventive maintenance, or modifications, shall organize the performance of those functions so as to separate the required inspection functions from the other maintenance, preventive maintenance, and alteration functions. The separation shall be below the level of administrative control at which overall responsibility for the required inspection functions and other maintenance, preventive amaintenance, and alteration functions are exercised.

Performance Rules : Inspections.

5.6.1.7—(*a*) General. Each person performing an inspection required by the authority shall perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements ; and

(*b*) Rotorcraft. Each person performing an inspection required on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or instructions for continued airworthiness of the manufacturer concerned—

(1) The drive shafts or similar systems,

(2) The main rotor transmission gear box for obvious defects,

(3) The main rotor and centre section (or the equivalent area), and

(4) The auxiliary rotor on helicopters.

(c) Annual and 100-hour inspections.

(1) Each person performing an annual or 100-hour inspection shall use a checklist while performing the inspection. The checklist may be of the person's own design, one provided by the manufacturer of the equipment being inspected, or one obtained from another source. This checklist shall include the scope and detail of the items prescribed by the authority. *See* is: 5.6.1.7 for components to be included in an annual or 100-hour inspection.

(2) Each person approving a piston-engined aircraft for return to service after an annual or 100 hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer's recommendations of-

(*i*) Power output (static and idle rpm) ;

(*ii*) Magnetos ;

(*iii*) Fuel and oil pressure ; and

(*iv*) Cylinder and oil temperature.

(3) Each person approving a turbine-engined aircraft for return to service after an annual or 100-hour inspection all, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer's recommendations.

(*d*) Progressive inspections.

(1) Each person performing a progressive inspection shall, at the start of a progressive inspection shall, at the start of a progressive inspection system, inspect the aircraft completely. After this initial inspection, routine and detailed inspections must be conducted as prescribed in the progressive inspection

schedule. Routine inspections consist of visual examination or check of the appliances the aircraft and its components and systems, insofar as practicable without disassembly. Detailed inspections consist of a thorough examination of the appliances, the aircraft, and its components and systems, with such disassembly as is necessary. For the purposes of this subparagraph, the overhaul of a component or system is considered to be a detailed inspection.

(2) If the aircraft is away from the station where inspections are normally conducted, an appropriately rated AME, an AMO or the manufacturer of the aircraft may perform inspections in accordance with the procedures and using the forms of the person who would otherwise perform the inspection.

(*e*) Continuous airworthiness maintenance program inspections.

(1) Each person performing the inspection program required for an AOC holder's aircraft or aircraft maintained under a continuous airworthiness maintenance program, shall perform the inspection in accordance with the instructions and procedures set forth in the inspection program.

Performance Rules : Airworthiness Limitations.

5.6.1.8—(*a*) Each person performing an inspection or other maintenance specified in an airworthiness limitations section of a current manufacturer's maintenance manual, or instructions for continued airworthiness, shall perform the inspection or other maintenance in accordance with that section, or in accordance with specifications approved by the authority.

5.7 Maintenance and Inspection Records and Entries

Content, Form and Disposition of records for maintenance, preventive maintenance, rebuilding and modification of aircraft and life limited parts.

5.7.1.1—*(a)* Each person who maintains, performs preventive maintenance, rebuilds, or modify an aircraft or life limited parts shall, when the work is performed satisfactorily, make an entry in the maintenance record of that equipment as follows-

(1) A description (or reference to data acceptable to the authority) of work performed, including-

(*i*) The total time in services (hours, calendar time and cycles, as appropriate) of the aircraft and all life-limited components ;

(*ii*) The current status of compliance with all mandatory continuing airworthiness information ;

(*iii*) Appropriate details of modifications and repairs ;

(*iv*) Time in service (hours, calendar time and cycles, as appropriate) since last overhaul of the aircraft or its components subject to a mandatory overhaul life ;

(*v*) The current status of the aircraft's compliance with the maintenance program ; and the detailed maintenance records to show that all requirements for signing of a maintenance release have been met.

(2) Completion date of the work performed ;

(3) Name, signature, certificate number, and kind of license held by the person approving the work. The signature constitutes the approval for return to service only for the work performed.

(*b*) In addition to the entry required by paragraph (*a*), major repairs and modifications shall be entered on a form, and the form disposed of, in the manner prescribed in is: 5.7.1.1, by the person performing the work.

Content, Form and Disposition of records for maintenance, preventive maintenance, overhaul and rebuilding of product.

5.7.1.2—(*a*) No person shall approve for return to service any aeronautical product that has undergone maintenance, preventive maintenance, overhaul or rebuilding of a product unless-

(1) The appropriate maintenance record entry has been made ;

(2) The repair or modification form authorised by or furnished by the authority has been executed in a manner prescribed by the authority ;

(3) If a repair or modification results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data are appropriately revised and set forth as prescribed.

(*b*) Additional entries for overhaul and rebuilding.

(1) No person shall describe in any required maintenance entry or form, an aeronautical product as being overhauled or rebuilt unless-

(*i*) It has been disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled using methods, techniques, and practices acceptable to the authority ; and

(*ii*) It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the authority, which have been developed and documented by the holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance manufacturing approval.

(2) No person shall describe in any required maintenance entry or form an aircraft or other aeronautical product as being rebuilt unless it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.

(*c*) If the maintenance, preventive maintenance, overhaul or rebuilding of a product is performed by an AMO, the AMO shall complete an airworthiness approval tag (CAA form) as prescribed in part 6.

Content, form and disposition of records of inspections for return to service.

5.7.1.3—*(a)* Inspection record entries. The person approving or disapproving the return to service of an aeronautical product after any inspection performed in accordance with part 8, shall make an entry in the maintenance record of that equipment containing the following information—

(1) Type of inspection and a brief description of the extent of the inspection ;

(2) Date of the inspection and aircraft or component total time in service;

(3) Signature, the license number, and kind of license held by the person approving or disapproving for return to service the aeronautical product ;

(4) If the aircraft or component is found to be airworthy and approved for return to service, the following or a similarly worded statement- "I certify that this aircraft/ component has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition";

(5) If the aircraft or component is not approved for return to service because of needed maintenance, non-compliance with the applicable specifications, airworthiness directives, or other approved data, the following or a similarly worded statement-i certify that this aircraft/component has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator ; and

(6) If an inspection is conducted under an inspection program provided for in part 8, the person performing the inspection shall make an entry identifying the inspection program accomplished, and containing a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(*b*) Listing of discrepancies. The person performing any inspection required in part 8 who finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, airworthiness directives or other approved data upon which its airworthiness depends, shall give the owner/operator a signed and dated list of those discrepancies.

5.8 CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

5.8.1.1 This subpart establishes the requirements to be met by an organisation to qualify for the issue or continuation of an approval for the management of aircraft continuing airworthiness. Scope.

5.8.1.2 An application for issue or variation of a continuing airworthiness management organisation approval shall be made on a form and in a manner established by the authority. Applicability.

5.8.1.3—(*a*) The grant of approval is indicated by the issue of the certificate included in is 5.8.1.3 by the authority. The approved continuing airworthiness management exposition must specify the scope of work deemed to constitute approval. Extent of Approval.

(*b*) Not withstanding paragraph (*a*), for commercial air transport, the approval shall be part of the air operator certificate issued by authority, for the aircraft operated.

Continuing Airworthiness management Exposition.

5.8.1.4—(*a*) The continuing airworthiness management organisation shall provide a continuing airworthiness management exposition containing the following information :

1. A statement signed by the accountable manager to confirm that the organisation will work in accordance with this part and the exposition at all times,

2. The organisation's scope of work,

3. The title(s) and name(s) of person(s) referred to in 5.8.1.6(*b*) &(*c*),

4. An organisation chart showing associated chains of responsibility between the person(s) referred to in 5.8.1.6(*b*) and (*c*).

5. A list of 5.8.1.7 airworthiness review staff,

6. A general description and location of the facilities,

7. Procedures specifying how the continuing airworthiness management organisation ensures compliance with this part, and ;

8. The continuing airworthiness management exposition amendment procedures.

8.9. The list of aircraft type and approved maintenance programme reference.

(*b*) The continuing airworthiness management exposition and its amendments shall be approved by the authority. Notwithstanding paragraph (*b*), minor amendments to the exposition may be approved through an exposition procedure (hereinafter called indirect approval).

Facilities.

5.8.1.5 The continuing airworthiness management organisation shall provide suitable office accommodation at appropriate locations for the personnel specified in 5.8.1.6 of these regulations.

Personnel Requirements.

5.8.1.6—(*a*) The organisation shall appoint an accountable manager, who has corporate authority for ensuring that all continuing airworthiness management activities can be financed and carried out in accordance with this part.

(*b*) For commercial air transport the accountable manager shall be the person who also has corporate authority for ensuring that all the operations of the operator can be financed and carried out to the standard required for the issue of an air operator's certificate.

(*c*) A person or group of persons shall be nominated with the responsibility of ensuring that the organisation is always in compliance with this subpart. Such person(s) shall be ultimately responsible to the accountable manager.

(*d*) For commercial air transport, the accountable manager shall designate a nominated post holder. This person shall be responsible for the management and supervision of continuing airworthiness activities, pursuant to paragraph (*c*).

(*e*) The nominated post holder referred to in paragraph (*d*) shall not be employed by an ncaa approved maintenance organization under contract to the operator, unless specifically agreed by the authority.

(*f*) The organisation shall have sufficient appropriately qualified staff for the expected work.

(*g*) All paragraph (*c*) and (*d*) persons shall be able to show relevant knowledge, background and appropriate experience related to aircraft continuing airworthiness.

(*h*) The qualification of all personnel involved in continuing airworthiness management shall be recorded.

Certificate of Maintenance Review Staff.

5.8.1.7—(*a*) To be approved to carry out certificate of maintenance reviews every six (6) months, an approved continuing airworthiness management organization shall have appropriate maintenance review staff to issue a certificate of maintenance review or recommendations.

In addition to part 5.8.1.6 requirements, these staff shall have acquired :

(1) At least five years' experience in continuing airworthiness, and ;

(2). An appropriate aircraft maintenance engineer license(amel) or an aeronautical degree or equivalent,

(3). Formal aeronautical maintenance training,

(4). A position within the approved organisation with appropriate responsibilities.

(*b*) Maintenance review staff nominated by the approved continuing airworthiness organisation can only be issued an authorisation by the approved continuing airworthiness management organisation when formally accepted by the authority after satisfactory completion of a maintenance review under supervision.

(*c*) The organisation shall ensure that maintenance review staff can demonstrate appropriate recent continuing airworthiness management experience.

(*d*) Maintenance review staff shall be identified by listing each person in the continuing airworthiness management exposition together with their maintenance review authorisation reference.

(*e*) The organisation shall maintain a record of all maintenance review staff, which shall include details of any appropriate qualification held together with a summary of relevant continuing airworthiness management experience and training and a copy of the authorisation. This record shall be retained until two years after the maintenance review staff have left the organisation.

Continuing Airworthiness Management.

5.8.1.8—(*a*) All continuing airworthiness management shall be carried out according to 5.5 of these regulation.

(b) For every aircraft managed, the approved continuing airworthiness management organisation shall :

(1). Develop and control a maintenance programme for the aircraft managed including any applicable reliability programme,

(2). Present the aircraft maintenance programme and its amendments to the authority for approval and

(3). Provide a copy of the programme to the owner of non-commercially operated aircraft,

(4). Manage the approval of modification and repairs,

(5). Ensure that all maintenance is carried out in accordance with the approved maintenance programme and released in accordance with 6.5.1.7 of these regulations ;

(6). Ensure that all applicable airworthiness directives and operational directives with a continuing airworthiness impact, are applied,

(7). Ensure that all defects discovered during scheduled maintenance or reported are corrected by an ncaa approved maintenance organisation ;

Ensure that the aircraft is taken to an ncaa approved maintenance organisation whenever necessary ;

(8). Coordinate scheduled maintenance, the application of airworthiness directives, the replacement of service life limited parts, and component inspection to ensure the work is carried out properly,

(9). Manage and archive all continuing airworthiness records and/or operator's technical log ;

(10). Ensure that the mass and balance statement reflects the current status of the aircraft.

(*c*) In the case of commercial air transport, when the operator is not an approved amo, the operator shall establish a written maintenance contract between the operator and an ncaa approved maintenance organisation or another operator, detailing the functions specified under part 9.4.1.2, ensuring that all maintenance is ultimately carried out by an ncaa approved maintenance organisation and defining the support of the quality functions of 5.8.1.12(*b*). The aircraft base, scheduled line maintenance and engine maintenance contracts, together with all amendments, shall be approved by the authority. However, in the case of :

(1). An aircraft requiring unscheduled line maintenance, the contract may be in the form of individual work orders addressed to the ncaa approved maintenance organisation.

(2). Component maintenance, including engine maintenance, the contract as referred to in paragraph (*c*) may be in the form of individual work orders addressed to the ncaa approved maintenance organisation.

5.8.1.9 The approved continuing airworthiness management organisation shall hold and use applicable current airworthiness data in the performance of 5.8.1.8 continuing airworthiness tasks. Documentation.

5.8.1.10—(*a*) To satisfy the requirement for a maintenance review of an aircraft, a full documented review of the aircraft records shall be carried out by the approved continuing airworthiness management organisation in order to be satisfied that: Maintenance Review.

1. Airframe, engine and propeller flying hours and associated flight cycles have been properly recorded,

2. The flight manual is applicable to the aircraft configuration and reflects the latest revision status,

3. All the maintenance due on the aircraft according to the approved maintenance programme has been carried out,

4. All known defects have been corrected or, when applicable, carried forward in a controlled manner,

All applicable airworthiness directives and mandatory bulletins have been applied and properly registered, and ;

5. All modifications and repairs applied to the aircraft have been registered and are approved according to part 5.7.1.2,

6. All service life limited components installed on the aircraft are properly identified, registered and have not exceeded their approved service life limit,

7. All maintenance has been released in accordance with this part 6.5.1.7,

8. The current mass and balance statement reflects the configuration of the aircraft and is valid,

9. The aircraft complies with the latest revision of its type design approved by the state of design,

10. If required, the aircraft holds a noise certificate corresponding to the current configuration of the aircraft in compliance with part 16 of these regulations.

(*b*) The approved continuing airworthiness management organisation's maintenance review staff shall carry out a physical survey of the aircraft. For this survey, maintenance review staff not appropriately qualified to part 2 of these regulations shall be assisted by such qualified personnel.

(*c*) Through the physical survey of the aircraft, the maintenance review staff shall ensure that :

1. All required markings and placards are properly installed,

2. The aircraft complies with its approved flight manual,

3. The aircraft configuration complies with the approved documentation,

4. No evident defect can be found that has not been addressed, and ;

5. No inconsistencies can be found between the aircraft and the paragraph (*a*) documented review of records.

(*e*) A certificate of maintenance review or a recommendation is issued by maintenance review staff appropriately authorized in accordance with subpart 5.8.1.7 on behalf of the approved continuing airworthiness management organisation when satisfied that the maintenance review has been properly carried out.

(f) A copy of the certificate of maintenance review shall be issued for an aircraft every six months and submitted to the authority within five (5) days.

(g) Maintenance review tasks shall not be sub-contracted.

(h) Should the outcome of the maintenance review be inconclusive, the authority shall be informed.

Privileges of the Organisation.

5.8.1.11—*(a)* An approved continuing airworthiness management organisation, may :

(1). Manage the continuing airworthiness of non-commercial air transport aircraft as listed on the approval certificate.

(2). Manage the continuing airworthiness of commercial and non-commercial air transport aircraft when listed on its air operator certificate.

(3). Arrange to carry out any task of continuing airworthiness within the limitation of its approval with another organisation that is working under its quality system.

(*b*) An approved continuing airworthiness management organisation, may additionally be approved to :

(1). Issue a certificate of maintenance review, or ;

(2). Make a recommendation for the renewal of certificate of airworthiness

(2).(3). *To issue recommendation to the authority for special flight permit to fly after maintenance check.*

Quality System.

5.8.1.12—(*a*) To ensure that the approved continuing airworthiness management organisation continues to meet the requirements of this subsection, it shall establish a quality system and designate a quality manager to monitor compliance with, and the adequacy of, procedures required to ensure airworthy aircraft. Compliance monitoring shall include a feedback system to the accountable manager to ensure corrective action as necessary.

(*b*) The quality system shall monitor camo activities. It shall at least include the following functions :

(1). Monitoring that all camo activities are being performed in accordance with the approved procedures, and ;

(2). Monitoring that all contracted maintenance is carried out in accordance with the contract, and ;

(3). Monitoring the continued compliance with the requirements of this part.

(*c*) The records of these activities shall be stored for at least two years.

(*d*) Where the approved continuing airworthiness management organisation is approved in accordance with another part, the quality system may be combined with that required by the other part.

(*e*) In case of commercial air transport the camo quality system shall be an integrated part of the operator's quality system.

(*f*) In the case of a small camo that does not have the privileges granted under 5.8.1.11(b) of these regulations, the quality system can be replaced by performing organisational reviews on a regular basis.

Changes to the Approved Continuing Airworthiness Organisation.

5.8.1.13—(*c*) In order to enable the authority to determine continued compliance with this part, the approved continuing airworthiness management organisation shall notify it of any proposal to carry out any of the following changes, before such changes take place :

(*i*). The name of the organisation.

(*ii*). The location of the organisation.

(*iii*). Additional locations of the organisation.

(*iv*). The accountable manager.

(*v*). Any of the persons specified in 5.8.1.6(*c*).

(*vi*). The facilities, procedures, work scope and staff that could affect the approval.

(*d*) In the case of proposed changes in personnel not known to the management beforehand, these changes shall be notified at the earliest opportunity but not exceeding ten (10) days.

Record-keeping.

5.8.1.14—(*a*) The continuing airworthiness management organisation shall record all details of work carried out. The records required by 8.3.1.9 and 9.4.1.8 of these regulations.

(*b*) If the continuing airworthiness management organisation has the privilege of 5.8.11(*b*), it shall retain a copy of each certificate of maintenance review and recommendation issued, together with all supporting documents.

(*c*) The continuing airworthiness management organisation shall retain a copy of all records listed in paragraph (*b*) until two years after the aircraft has been permanently withdrawn from service.

(*d*) The records shall be stored in a manner that ensures protection from damage, alteration and theft.

(*e*) All computer hardware used to ensure backup shall be stored in a different location from that containing the working data in an environment that ensures they remain in good condition.

(*f*) Where continuing airworthiness management of an aircraft is transferred to another organisation or person, all retained records shall be transferred to the said organisation or person. The time periods prescribed for the retention of records shall continue to apply to the said organisation or person.

(*g*) Where a continuing airworthiness management organisation terminates its operation, all retained records shall be transferred to the owner of the aircraft.

Continued Validity of Approval.

5.8.1.15—(*a*) An approval shall be issued for a duration of two years. It shall remain valid subject to :

(*i*). The organisation remaining in compliance with this subsection.

(*ii*). The authority being granted access to the organisation to determine continued compliance with this part, and ;

(*iii*). The approval not being surrendered or revoked.

(*b*) Upon surrender or revocation, the approval certificate shall be returned to the authority.

CIVIL AVIATION REGULATIONS

PART 5-IMPLEMENTING STANDARDS
NIGERIA

MAY - NOVEMBER, 2015

Documentation.

Maintenance
Review.

CIVIL AVIATION REGULATIONS

PART 5-IMPLEMENTING STANDARDS

IS : 5.1.1.2 MODIFICATION, REPAIRS AND PREVENTATIVE MAINTENANCE.

IS : 5.1.1.2(*a*)(8)—(*a*) *Airframe Major Modifications*.—Major modifications include modifications to the listed aircraft parts, or the listed types of modifications (when not included in the applicable manufacturer specifications or type certificate data sheet (TCDS))—

(1) Wings.

(2) Tail surfaces.

(3) Fuselage.

(4) Engine mounts.

(5) Control system.

(6) Landing gear.

(7) Hull or floats

(8) Elements of an airframe including spars, ribs, fittings, shock absorbers, bracing, cowlings, fairings, and balance weights.

(9) Hydraulic and electrical actuating system of components.

(10) Rotor blades.

(11) Changes to the empty weight or empty balance which result in an increase in the maximum certified weight or centre of gravity limits of the aircraft.

(12) Changes to the basic design of the fuel, oil, cooling, heating, cabin pressurisation, electrical, hydraulic, de-icing, or exhaust systems.

(13) Changes to the wing or to fixed or movable control surfaces which affect flutter and vibration characteristics.

(*b*) *Powerplant Major Modifications.*—Major powerplant modifications, even when not listed in the applicable engine specifications, include—

(1) Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine parts which requires extensive rework and testing of the engine.

(2) Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the original manufacturer or parts not specifically approved by the authority.

(3) Installation of an accessory which is not approved for the engine.

(4) Removal of accessories that are listed as required equipment on the aircraft or engine specification.

(5) Installation of structural parts other than the type of parts approved for the installation.

(6) Conversions of any sort for the purpose of using fuel of a rating or grade other than that listed in the engine specifications.

(*c*) *Propeller major modifications.*—Major propeller modifications, when not authorised in the applicable propeller specifications, include-

(1) Changes in blade design.

(2) Changes in hub design.

(3) Changes in the governor or control design.

(4) Installation of a propeller governor or feathering system.

(5) Installation of propeller de-icing system.

(6) Installation of parts not approved for the propeller.

(*d*) *Appliance major modifications.*—Modifications of the basic design not made in accordance with recommendations of the appliance manufacturer or in accordance with applicable airworthiness directives are appliance major modifications. In addition, changes in the basic design of radio communication and navigation equipment approved under type certification or other authorisation that have an effect on frequency stability, noise level, sensitivity, selectivity, distortion, spurious radiation, automatic volume control (avc) characteristics, or ability to meet environmental test conditions and other changes that have an effect on the performance of the equipment are also major modifications.

IS: 5.1.1.2(*a*)(9)—(*a*) Airframe major repairs. Repairs to the following parts of an airframe and repairs of the following types, involving the strengthening, reinforcing, splicing, and manufacturing of primary structural members or their replacement, when replacement is by fabrication such as riveting or welding, are airframe major repairs.

(1) Box beams.

(2) Monocoque or semimonocoque wings or control surfaces

(3) Wing stringers or chord members

(4) Spars.

(5) Spar flanges.

(6) Members of truss-type beams.

(7) Thin sheet webs of beams.

(8) Keel and chine members of boat hulls or floats.

(9) Corrugated sheet compression members which act as flange material of wings or tail surfaces.

(10) Wing main ribs and compression members.

(11) Wing or tail surface brace struts.

(12) Engine mounts.

(13) Fuselage longerons.

(14) Members of the side truss, horizontal truss, or bulkheads.

(15) Main seat support braces and brackets.

(16) Landing gear brace struts.

(17) Axles.

(18) Wheels.

(19) Parts of the control system such as control columns, pedals, shafts, brackets, or horns.

(20) Repairs involving the substitution of material.

(21) The repair of damaged areas in metal or plywood stressed covering exceeding six inches in any direction.

(22) The repair of portions of skin sheets by making additional seams.

(23) The splicing of skin sheets

(24) The repair of three or more adjacent wing or control surface ribs or the leading edge of wings and control surfaces, between such adjacent ribs.

(25) Repair of fabric covering involving an area greater than that required to repair two adjacent ribs.

(26) Replacement of fabric on fabric covered parts such as wings, fuselages, stabilisers, and control surfaces.

(27) Repairing, including rebottoming, of removable or integral fuel tanks and oil tanks.

(*b*) *Powerplant major repairs.*—Repairs of the following parts of an engine and repairs of the following types, are powerplant major repairs-

(1) Separation or disassembly of a crankcase or crankshaft of a piston engine equipped with an integral supercharger.

(2) Separation or disassembly of a crankcase or crankshaft of a piston engine equipped with other than spur-type propeller reduction gearing.

(3) Special repairs to structural engine parts by welding, plating, metalising, or other methods.

(*c*) *Propeller major repairs*.—Repairs of the following types to a propeller are propeller major repairs-

(1) Any repairs to or straightening of steel blades.

(2) Repairing or machining of steel hubs.

(3) Shortening of blades.

(4) Retipping of wood propellers.

(5) Replacement of outer laminations on fixed pitch wood propellers.

(6) Repairing elongated bolt holes in the hub of fixed pitch wood propellers.

(7) Inlay work on wood blades.

(8) Repairs to composition blades.

(9) Replacement of tip fabric.

(10) Replacement of plastic covering.

(11) Repair of propeller governors.

(12) Overhaul of controllable pitch propellers.

(13) Repairs to deep dents, cuts, scars, nicks, etc., and straightening of aluminium blades.

(14) The repair or replacement of internal elements of blades.

(*d*) *Appliance major repairs*.—Repairs of the following types to appliances are appliance major repairs-

(1) Calibration and repair of instruments.

(2) Calibration of avionics or computer equipment.

(3) Rewinding the field coil of an electrical accessory.

(4) Complete disassembly of complex hydraulic power valves.

(5) Overhaul of pressure type carburetors, and pressure type fuel, oil, and hydraulic pumps.

Preventive Maintenance.

IS : 5.1.1.2(*a*)(11)—(*a*) *Preventive Maintenance*.—Preventive maintenance is limited to the following work, provided it does not involve complex assembly operations.

(1) Removal, installation and repair of landing gear tires.

(2) Replacing elastic shock absorber cords on landing gear.

(3) Servicing landing gear shock struts by adding oil, air, or both.

(4) Servicing landing gear wheel bearings, such as cleaning and greasing.

(5) Replacing defective safety wiring or cotter keys.

(6) Lubrication not requiring disassembly other than removal of non-structural items such as cover plates, cowlings, and fairings.

(7) Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces.

(8) Replenishing hydraulic fluid in the hydraulic reservoir.

(9) Refinishing decorative coating of fuselage, wings, tail group surfaces (excluding balanced control surfaces), fairings, cowling, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required.

(10) Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices.

(11) Repairing upholstery and decorative furnishings of the cabin or cockpit when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect primary structure of the aircraft.

(12) Making small simple repairs to fairings, non-structural cover plates, cowlings, and small patches and reinforcements not changing the contour so as to interfere with proper airflow.

(13) Replacing side windows where that work does not interfere with the structure of any operating system such as controls, electrical equipment, etc.

(14) Replacing safety belts.

(15) Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system.

(16) Troubleshooting and repairing broken circuits in landing light wiring circuits.

(17) Replacing bulbs, reflectors, and lenses of position and landing lights.

(18) Replacing wheels and skis where no weight and balance computation is involved.

(19) Replacing any cowling not requiring removal of the propeller or disconnection of flight controls.

(20) Replacing or cleaning spark plugs and setting of spark plug gap clearance.

(21) Replacing any hose connection except hydraulic connections.

(22) Replacing prefabricated fuel lines.

(23) Cleaning fuel and oil strainers.

(24) Replacing and servicing batteries.

(25) Replacement or adjustment of non-structural fasteners incidental to operations.

(26) The installation of anti-misfueling devices to reduce the diameter of fuel tank filler openings provided the specific device has been made a part of the aircraft type certificate data by the aircraft manufacturer, the manufacturer has provided appropriately approved instructions acceptable to the authority for the installation of the specific device, and installation does not involve the disassembly of the existing filler opening.

Issuance or Validation of a Standard Certificate of Airworthiness.

IS: 5.4.1.5—(*b*) The standard certificate of airworthiness issued by the authority shall be as follows.
Nigerian civil aviation authority

NIGERIA CIVIL AVIATION AUTHORITY

CERTIFICATE OF AIRWORTHINESS

NO. *___________________

NATIONALITY AND REGISTRATION MARKS	MANUFACTURER AND MANUFACTURER'S DESIGNATION OF AIRCRAFT**	AIRCRAFT SERIAL NO.
Manufacture		Date of
CATEGORY: ***		

This Certificate of Airworthiness is issued pursuant to the Convention on International Civil Aviation dated 7th December, 1944 and the Civil Aviation Act, 2006 and the Order and Regulations issued thereunder, in respect of the above-mentioned aircraft, which is considered to be airworthy when equipped, maintained and operated in accordance with the foregoing and the pertinent operating limitations. A Flight Manual forms part of this Certificate.

Designation: ________________ Signature: ______________

Date of First Issue: ________________ *for the Nigerian Civil Aviation Authority*

This certificate is valid for the period(s) indicated below****	Signature, official Stamp and date
From to	

NOTES :

1. No entries or endorsements may be made on this certificate except in the manner and by the persons authorized for the purpose
2. If this certificate is lost, the issuing authority should be informed at once, the certificate number being quoted.
3. Any person finding this certificate should forward it immediately to the issuing authority
4. This certificate must be displayed aboard the aircraft.

* For use of the state of registry.

** Manufacturer's designation of aircraft will contain the aircraft type and model.

*** This space is normally used to indicate the certification basis, *i.e.*, certification code, with which the particular aircraft complies and/or its permitted operational category, *e.g.*, commercial air transportation, aerial work, or private.

**** This space shall be used either for periodic endorsement (giving date of expiry) or for a statement that the aircraft is being maintained under a system of continuous inspection.

IS : 5.4.1.6 The Special Certificate of Airworthiness issued by Nigeria shall be as follows.

Issuance of a Special Certificate of Airworthiness.

NIGERIA

NIGERIA CIVIL AVIATION AUTHORITY

SPECIAL AIRWORTHINESS CERTIFICATE	
A Category/Designation	
Purpose	
B Manufacturer	Name
	Address
C Flight	From
	To
D Registration No.	Serial No.
Builder	Model
E Date of Issuance	Expiry
Operating Limitations Date [Dd/Mm/yyyy] are Part of this Certificate	
Signature of CAA Representative	Designation or Office Number
Any Alteration, reproduction, or misuse of this Certificate may be punishable as specified in Nig.car spart 1. This Certificate must be displayed in the Aircraft in accordance with Nig.CARs Part 8	
CAA Form No. [ ]	*See Reverse Side*

Front of Form

A	This special airworthiness certificate is issued under the authority of the Nigerian law and Nig. CARs Part 5.
B	This special airworthiness certificate authorised the manufacturer named on the reverse side to conduct production flight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests (1) carrying persons or property for remuneration or hire and/or (2) carrying persons not essential for the purpose of the flight.
C	This special airworthiness certificate authorised the flight specified for the flight listed on the reverse side for the sole purpose shown in block A.
D	This special airworthiness certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable Nig.CARs. The aircraft does not meet the requirements of the applicable and comprehensive detailed airworthiness code as provided by annex 8 of the convention on international civil aviation. No person may operate the aircraft described on the reverse side (1) except in accordance with the applicable Nig.CARs and in accordance with conditions and limitations which may be prescribed by the authority as part of this certificate, or (2) over any foreign country without the permission of that country.
E	Unless sooner surrendered, suspended or revoked, this special airworthiness certificate is effective for the duration and under the conditions prescribed in the Nig.CARs.

Back of Form

IS: 5.4.1.15 EXPORT CERTIFICATE OF AIRWORTHINESS

(1) General

(*a*) *Kinds of Approval* :

(*i*) Export airworthiness approval of aircraft is issued in theform of export certificate of airworthiness. Such certificate does not authorize the operation of aircraft.

(*ii*) Export airworthiness approval of other products, parts (except stan dard parts) or appliance are issued in the form of authorised release certificate (ncaa form 1) issued in compliance with applicable parts of this regulation.

(*b*) *Location of product, part or appliance.*—An export airworthiness approval is only issued if in addition to complying with applicable regulation, the authority finds that the location of the product, part or appliance does not place an undue burned upon the authority in administering the provision of this Subpart.

(*c*) *Export airworthiness approval exceptions*.—If the export airworthiness approval is issued on the basis of a written statement by the importing state, the requirements that are not met and the difference in configuration, if any, between the part or appliance to be exported and the related approved products, part or appliance must be listed on the export airworthiness approval as exceptions.

(*d*) Application for an export certificate of airworthiness.

(*e*) An application for an export certificate of airworthiness must be made in a form and manner acceptable to the authority and be submitted to the appropriate office.

(*f*) Each application must include or reference, as applicable :

(*i*) A weight and balance report with a loading schedule when applicable, for each aircraft in accordance with the applicable part of these regulations.

(*ii*) A maintenance manual for each aircraft when such a manual is re quired by the applicable airworthiness rules.

(*iii*) Evidence of compliance with the applicable airworthiness directives. A suitable notation must be made when such directives are not complied with.

(*iv*) When temporary installations are incorporated in an aircraft for the purpose of export delivery, the applicable form must include a general description of the installations together with a statement that the aircraft is restored to the approved configuration upon completion of the delivery flight.

(*v*) For used aircraft, historical records to establish production, modification, and maintenance standard of the aircraft or product.

(*vi*) A description of the used, if any for the preservation and packaging of such aircraft to protect them against corrosion and damage while in transits or storage. The description must also indicate the duration of the effectiveness of such methods.

(*vii*) The flight manual when such material is required by the applicable airworthiness regulations for the particular aircraft.

(*viii*) A statements as to the date on which any documents not made available at the date of application are expected to be available.

(*ix*) A statement as to the date when title passed or is expected to pass to a foreign purchaser.

(2) Issuance of export certificate of airworthiness

(*a*) The authority will issue an export certificate airworthiness if the applicant shows, except as provided in sub-paragraph (*b*) of this paragraph, that :

(*i*) The aircraft conforms to the type design acceptable to the importing country.

(*ii*) Used aircraft possess or qualify for a valid certificate of airworthiness issued by the authority.

(*iii*) The aircraft meets the additional requirements for import of the importing country i.e. All documents listed in this requirements.

(*b*) An aircraft need not meet a requirement specified in paragraph a (*a*) to (*b*) of this paragraph as applicable, if acceptable to the importing country and the importing country indicates that acceptability.

Performance Rules : Inspection.

IS: 5.6.1.7—(*a*) Each person performing an annual or 100-hour inspection shall, before that inspection, thoroughly clean the aircraft and aircraft engine and remove or open all necessary inspection plates, access doors, fairings, and cowlings.

(*b*) Each person performing an annual or 100-hour inspection shall inspect, where applicable, the following components—

(1) *Fuselage and hull group* :

(*i*) *Fabric and Skin* - for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.

(*ii*) *Systems and components* - for improper installation, apparent defects, and unsatisfactory operation.

(*iii*) The cabin and cockpit group.

(*iv*) *Generally* - for uncleanness and loose equipment that might foul the controls.

(*v*) *Seats and safety belts* - for poor condition and apparent defects.

(*vi*) *Windows and windshields* - for deterioration and breakage.

(*vii*) *Instruments* - for poor condition, mounting, marking, and (where practicable) for improper operation.

(*viii*) *Flight and engine controls* - for improper installation and improper operation.

(*ix*) *Batteries.*—for improper installation and improper charge.

(*x*) *All Systems.*—for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

(2) *Engine and nacelle group*—

(*i*) *Engine section* - for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.

(*ii*) *Studs and nuts* - for improper torquing and obvious defects.

(*iii*) *Internal engine* - for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.

(*iv*) *Engine mount* - for cracks, looseness of mounting, and looseness of engine to mount.

(*v*) *Flexible vibration dampeners* - for poor condition and deterioration.

(*vi*) *Engine controls* - for defects, improper travel, and improper safetying.

(*vii*) *Lines, hoses, and clamps* - for leaks, improper condition, and looseness.

(*viii*) *Exhaust stacks* - for cracks, defects, and improper attachment.

(*ix*) *Accessories* - for apparent defects in security of mounting.

(*x*) *All systems* - for improper installation, poor general condition, defects, and insecure attachment.

(*xi*) *Cowling* - for cracks and defects.

(3) *Landing gear group—*

(*i*) *All units* - for poor condition and insecurity of attachment.

(*ii*) *Shock absorbing devices* - for improper oleo fluid level.

(*iii*) Linkage, trusses, and members - for undue or excessive wear, fatigue, and distortion.

(*iv*) *Retracting and locking mechanism* - for improper operation.

(*v*) *Hydraulic lines* - for leakage.

(*vi*) *Electrical system* - for chafing and improper operation of switches.

(*vii*) *Wheels* - for cracks, defects, and condition of bearings.

(*viii*) *Tires* - for wear and cuts.

(*ix*) *Brakes* - for improper adjustment.

(*x*) *Floats and skis* - for insecure attachment and obvious or apparent defects.

(4) *Wing and centre section assembly for—*

(*i*) Poor general condition,

(*ii*) Fabric or skin deterioration,

(*iii*) Distortion,

(*iv*) Evidence of failure, and

(*v*) Insecurity of attachment.

(5) *Complete empennage assembly for—*

(*i*) Poor general condition,

(*ii*) Fabric or skin deterioration,

(*iii*) Distortion,

(*iv*) Evidence of failure,

(v) Insecure attachment,

(*vi*) Improper component installation, and

(*vii*) Improper component operation.

(6) *Propeller group—*

(*i*) *Propeller assembly* - for cracks, nicks, binds, and oil leakage,

(*ii*) *Bolts* - for improper torquing and lack of safety.

(*iii*) *Anti-icing devices* - for improper operations and obvious defects, and

(*iv*) *Control mechanisms* - for improper operation, insecure mounting, and restricted travel.

(7) *Avionics/instrument group*—

(*i*) Avionics/instruments equipment - for improper installation and insecure mounting.

(*ii*) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.

(*iii*) Bonding and shielding - for improper installation and poor condition.

(*iv*) Antenna including trailing antenna - for poor condition, insecure mounting, and improper operation.

(8) *Electronic/electrical group*—

(*i*) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.

(*ii*) Bonding and shielding - for improper installation and poor condition.

(*iii*) Each installed miscellaneous item that is not otherwise covered by this listing and/or has instructions for continued airworthiness - for improper installation and improper operation.

IS: 5.7.1.1 CONTENT, FORM AND DISPOSITION OF RECORDS FOR MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING AND MODIFICATION OF AIRCRAFT AND LIFE LIMITED PARTS.

Recording of major Repairs and Modifications.

IS: 5.7.1.1(*b*)—(*a*) Each person performing a major repair or major modification shall—

(1) Execute the appropriate form prescribed by the authority at least in duplicate ;

(2) Give a signed copy of that form to the aircraft owner/operator ; and

(3) Forward a copy of that form to the authority, in accordance with authority instructions, within 48 hours after the aeronautical product is approved for return to service.

(*b*) In place of the requirements of paragraph (*a*), major repairs made in accordance with a manual or specifications acceptable to the authority, an AMO may—

(1) Use the customer's work order upon which the repair is recorded ;

(2) Give the aircraft owner a signed copy of the work order and retain a duplicate copy for at least one year from the date of approval for return to service of the aeronautical product ;

(3) Give the aircraft owner a maintenance release signed by an authorised representative of the amo and incorporating the following information—

(*i*) Identity of the aeronautical product ;

(*ii*) If an aircraft, the make, model, serial number, nationality and registration marks, and location of the repaired area ;

(iii) If an aeronautical product, give the manufacturer's name, name of the part, model, and serial numbers (if any) ; and

(4) Include the following or a similarly worded statement—

The aeronautical product identified above was repaired, overhauled and inspected in accordance with currently effective, applicable instructions of the state of design and regulatory requirements of the Authority, and is approved for return to service.

Pertinent details of the repair are on file at this maintenance organisation.

Order no.______________________ date____________________

Signed____
(Signature of authorised representative)

____
(Facility Name) (AMO Certificate Number)

____
(Address)

(c) The following sample form may be used to record major modifications and repairs.

MAJOR REPAIR AND MODIFICATION (Airframe, Powerplant, Propeller, or Appliance)	Nigeria
	For CAA Use Only
	Office Identification

INSTRUCTIONS : Print or Type all entries. *See* Regulation Part 5, 5.7.1.1(*b*) And IS: 5.7.1.1 for instructions and disposition of this form.

1. Aircraft	Make	Model
	Serial Number	Nationality and Registration Mark
2. Owner	Name (As shown on certificate of registration)	Address (As shown on registration certificate)

3. For Authority Use Only

4. Unit Identification				**5. Type**	
Unit	Make	Model	Serial Number	Repair	Modification
Airframe	-------(As described in item 1 above)-------				
Powerplant					
Propeller					
Appliance	Type				
	Manufacture				

6. Conformity Statement

A. Organisation Name and Address	B. Kind of Licence/Organisation	C. Certificate/Licence Number
	☐ Licensed (AME) ☐ A ☐ P or ☐ A/P	(For an AMO include the appropriate ratings issued for the major repair or modification)
	☐ Approved Maintenance Organisation	
	☐ Manufacturer AMO	

D. I certify that the repair and/or modification made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of part 5 of the regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date	Signature of Authorised Individual

<table>
<tr><td colspan="5">7. Approval for Return to Service</td></tr>
<tr><td colspan="5">Pursuant to the authority given persons specified below, the unit(s) identified in item 4 was inspected.</td></tr>
<tr><td colspan="5">In the manner prescribed by the Director of the Civil Aviation Authority and is
☐ APPROVED ☐ REJECTED</td></tr>
<tr><td rowspan="2">BY</td><td>☐ CAA Inspector</td><td>☐ Inspection Authorisation</td><td></td><td rowspan="2">Other (Specify)</td></tr>
<tr><td>☐ Maintenance Organisation</td><td>☐ Other</td><td></td></tr>
<tr><td colspan="2">Date of Approval or Rejection</td><td colspan="2">Certificate or Designation Number</td><td>Signature or Authorised Individual</td></tr>
</table>

FORM NO. AC-AWS014A
Page 1

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. A modification must be compatible with all previous modifications to assure continued conformity with the applicable airworthiness requirements.

8. Description of work accomplished (If more space is required, attach additional sheets. Identify each page with aircraft nationality and registration mark and date work completed.)

Form No. AC-AWS014A
Page 2

INSTRUCTIONS FOR COMPLETION OF MAJOR REPAIR AND MODIFICATION FORM

Item 1—Aircraft.— Information to complete the "make," "model," and "serial number" blocks will be found on the aircraft manufacturer's identification plate. The "nationality and registration mark" is the same as shown on certificate of aircraft registration.

Item 2—Owner.—Enter the aircraft owner's complete name and address as show on the certificate of aircraft registration.

Note: When a major repair or modification is made to a spare part or appliance, items 1 and 2 will be left blank, and the original and duplicate copy of the form will remain with the part until such time as it is installed on an aircraft. The person installing the part shall then enter the required information in blocks 1 and 2, give the original of the form to the aircraft owner/operator, and forward the duplicate copy to the authority within 48 hours after the work is inspected.

Item 3—For authority use only.—Approval may be indicated in item 3 when the authority determines that data to be used in performing a major modification or a major repair complies with accepted industry practices and all applicable Nigerian regulations. Approval is indicated in one of the following methods:

(1) Approval by examination of data only - one aircraft only: "The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorised in 5.6.1.4.

(2) Approval by physical inspection, demonstration, testing, etc. Of the data and aircraft - one aircraft only" "the modification or repair identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspections by a person in 5.6.1.4."

(3) Approval by examination of data only - duplication on identical aircraft. "The modification identified herein complies with the applicable airworthiness requirements and is approved for duplication on identical aircraft make, model, and modified configuration by the original modifier."

A signature in item 3, "for authority use only," indicates approval of the data described in that section for use in accomplishing the work described under item 8, "description of the work accomplished." This signature does not indicate CAA approval of the work described under item 8 for return to service.

Item 4—Unit identification. The information blocks under item 4 are used to identify the airframe, powerplant, propeller, or appliance repaired or modified. It is only necessary to complete the blocks for the unit repaired or modified.

Item 5—Type. Enter a checkmark in the appropriate column to indicate if the unit was repaired or modified.

Item 6—Conformity statement.

"A" - agency's name and address. Enter name of the AME, AMO or manufacturer accomplishing the repair or modification. AME s shall enter their name and permanent mailing address. Manufacturers and AMOs shall enter the name and address under which they do business.

"B" - kind of Licence/Organisation. Check the appropriate box to indicate the type of person or organisation who performed the work.

"C" - Certificate/licence number. AME s shall enter their AME licence number in this block. AMO's shall enter their AMO certificate number and the rating or ratings under which the work was performed. Manufacturers shall enter their type production or supplemental type certificate (STC) number. Manufacturers of technical standard orders (TSO) appliances modifying these appliances shall enter the TSO number of the appliance modified.

"D" - Compliance statement. This space is used to certify that the repair or modification was made in accordance with part 5 of the regulations. For work performed or supervised by a licensed AME not employed by a manufacturer or AMO, the AME shall enter the date the repair or modification was completed and sign the record with the AME's full name. AMOs are permitted to authorise persons in their employ to date and sign this conformity statement.
A signature in item 6, "conformity statement," is a certification by the person performing the work that it was accomplished in accordance with applicable CAA and CAA-approved data. The certification is only applicable to that work described under item 8, "description of work accomplished. This signature does not indicate CAA approval of the work described under item 8 for return to service.

Item 7—Approval for return to service.—Part 5 of the regulations establishes the conditions under which major repairs and modifications to airframes, powerplants, propellers, and/or appliances may be approved for return to service. This portion of the form is used to indicate approval or rejection of the repair or modification of the unit involved and to identify the person or agency making the airworthiness inspection. Check the "approved" or "rejected" box to indicate the finding. Additionally, check the appropriate box to indicate who made the finding. Use the box labeled "other" to indicate a finding by a person other than those listed. Enter the date the finding was made. The authorised person who made the finding shall sign the form and enter the appropriate certificate or designation number.

(1) *Previously approved data.* The forms will be completed as instructed ensuring that item 7 is completed as noted above.

(2) *Non—previously approved data.* The form will be completed as instructed, leaving item 7, "approval for return to service" blank and both copies of the form will be sent to the Authority with supporting data. When the CAA determines that the major repair or modification data complies with the applicable regulations and is in conformity with accepted industry practices, data approval will be recorded by entering an appropriate statement in item 3, "for CAA use only." Both forms and supporting data will be returned to the applicant who will complete item 7 "approval for return to service." The applicant will give the original of the form, with its supporting data to the aircraft owner or operator and return the duplicate copy to the Authority for inclusion in the aircraft records at its aircraft registry.

(3) A signature in item 7, "approval for return to service," does not signify CAA approval unless the box to the left of "CAA inspector" has been checked. The other persons listed in item 7 are authorised to "approve for return to service" if the repair or modification is accomplished using CAA-approved data, performed in accordance with part 5 of the regulations, and found to conform.

Item 8—Description of work accomplished. A clear, concise, and legible statement describing the work accomplished should be entered in the item 8 on the reverse side of the form. It is important that the location of the repair or modification, relative to the aircraft or component, be described. The approved data used as the basis for approving the major repair or modification for the return to service should be identified and described in this area.

(1) For example, if a repair was made to a buckled spar, the description and entered in this part might begin by stating, "removed wing from aircraft and removed skin from outer 6 feet. Repaired buckled spar 49 inches from the tip in accordance with .... " And continue with a description of the repair. The description should refer to applicable regulations and approved data used to substantiate the airworthiness of the repair or modification. If the repair or modification is subject to being covered by skin or other structures, statement should be made certifying that a precover inspection was made and that covered areas were found satisfactory.

(2) Data used as a basis for the approving major repairs or modifications for return to service shall be approved prior to its use for that purpose and includes : Airworthiness directives, advisory circulars under certain circumstances, TSO parts manufacturing approval, approved manufacturer's instructions, kits and service handbooks, type certificates data sheets, and aircraft specifications. Supporting data such as stress analyses, test reports, sketches or photographs shall be submitted on the form. These supporting data will be returned to the applicant by the authority.

(3) If additional space is needed to describe the repair or modification, attach sheets bearing the aircraft nationality and registration mark and the date work was completed.

(4) Showing weight and balance computations under this item is not required; however, it may be done. In all cases where weight and balance of the aircraft are affected, the changes shall be entered in the aircraft weight and balance records with the date, signature, and reference to the work performed that required the changes.

Note : *NCAA MR and M Form is not authorised for use on other than Nigerian-registered aircraft. If a foreign Civil Aviation Authority requests the form, as a record of work performed, it may be provided.*

[NIGERIAN CIVIL AVIATION AUTHORITY]

Continuing Airworthiness Management Organisation Certificate

Number

This certificate is *issued to*

Whose business address is

**Upon finding that its organisation complies in all respects with the equirements of the Nigeria Civil Aviation Regulations Part* 5.8, *relating to the establishment of* a *Continuing Airworthiness Management Organisation and is approved to manage the continuing airworthiness of the aircraft listed in the attached scope of approval and, when tipulated. to issue recommendations for Certificate of Airworthiness and Certificate of Maintenance Review after maintenance review* as *specified in Part 5.8.1.10.*

l*This cettificate shall continue in effect until [DATE]* unless *cancelled, suspended, or revoked.*

Extraordinary

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NIGERIAN CIVIL AVIATION REGULATIONS

PART 6 — APPROVED MAINTENANCE ORGANISATION

INTRODUCTION

Part 6 of the Nigeria Civil Aviation Regulations provides regulations for the registration and monitoring of Approved Maintenance Organisations (AMO) in Nigeria. The proper maintenance of aircraft is fundamental to aviation safety, and requires meticulous record keeping. Maintenance requirements for AOC holders with integral maintenance organisations with no AMO certificate are addressed in Part 9 of these regulations, Air Operator Certification and Administration. Please note that Section 6.2.1.5(*a*)(4) requires an AMO applicant within Nigeria to disclose any and all AMO certificates in any Contracting State other than Nigeria. Many regional airline consortia use common maintenance facilities in one Contracting State. This practice does not relieve Nigeria from approving the AMO that its AOC holders use. Knowledge of the other Contracting State's AMO licensing and regulating practices will allow the Authority both to communicate with the Authority overseeing the AMO certificate, and to weigh the AMO requirements of the other Contracting State for satisfaction of Nigeria's own regulations. Nig. CARs Part 6 is based on *Annex* 6 Part I, Chapter 8:8.7 and the ICAO Doc 9760, Airworthiness Manual, First Edition (2001), Vol. 1, Chapter 7, and Advance Section Edition, Part IV, Chapter 4.

B 1362

NIGERIA CIVIL AVIATION REGULATIONS

PART 11 — APPROVED MAINTENANCE ORGANISATION

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IS : 6.2.1.5 Application for an AMO Certificate.

IS : 6.2.1.14. Quality System.

IS : 6.3.1.2. Housing and Facility Requirements.

IS : 6.3.1.3 Equipment, Tools, and Materials.

IS : 6.4.1.1 Per sonnel Requirements.

IS : 6.4.1.2 Indoctrination, Initial, Recurrent, Specialised and Remedial Training.

IS : 6.4.1.3 Dangerous Goods Training Programme.

IS : 6.4.1.5 Records of Management, Supervisory, Inspection and Certifying Staff.

IS : 6.5.1.1 AMO Procedures Manual.

IS : 6.5.1.7 Certificate of Release to Service of an Aircraft, Part, Component Or Assembly.

IS : 6.5.1.9 Airworthiness Data—Instructions for Continued Airworthiness.

6.5. AMO Operating Rules.

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6.5.1.4. Contract Maintenance.

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6.5.1.6. Limitations on the AMO.

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6.5.1.8. Maintenance Records.

6.5.1.9. Airworthiness Data—Instructions for Continued Airworthiness.

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6.5.1.11. Authority to Conduct Inspections.

6.5.1.12. AMO Performance Standards.

S.I. No. 36 of 2015

NIGERIAN CIVIL AVIATION REGULATIONS

PART 6 — APPROVED MAINTENANCE ORGANISATION

6.1. General

6.1.1.1.—(*a*) Part 6 prescribes the requirements for issuing approvals to organisations for the maintenance, preventive maintenance, and alterations of aircraft and aeronautical products and prescribes the general operating rules for an Approved Maintenance Organisation (AMO). Applicability.

6.1.1.2.—(*a*)—For the purpose of Part 6, the following definitions shall apply— Definitions.

(1) *Accountable Manager.*—The person acceptable to the authority who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the authority, and any additional requirements defined by the operator.

(2) *Approval for return to service.—see* maintenance release.

(3) *Approved data* — Technical information approved by the Authority.

(4) *Approved Maintenance Organisation* (*AMO*) - An organisation approved to perform specific aircraft maintenance activities by the Authority. These activities may include the inspection, overhaul, maintenance, repair and/or alteration and release to service of aircraft or aeronautical products.

(5) *Article* — Any item, including but not limited to, an aircraft, airframe, aircraft engine, propeller, appliance, accessory, assembly, sub-assembly, system, subsystem, component, unit, product, or part.

(6) *Calibration* — A set of operations, performed in accordance with a definite documented procedure that compares the measurement performed by a measurement device or working standard with a recognised Bureau of Standards for the purpose of detecting and reporting or eliminating adjustment errors in the measurement device, working standard, or aeronautical product tested.

(7) *Composite* — Structural materials made of substances, including, but not limited to, wood, metal, ceramic, plastic, fiber-reinforced materials, graphite, boron, or epoxy, with built-in strengthening agents that may be in the form of filaments, foils, powders, or flakes, of a different material.

(8) *Computer system* — Any electronic or automated system capable of receiving, storing, and processing external data, and transmitting and presenting such data in a usable form for the accomplishment of a specific function.

(9) *Directly in charge* — Means an appropriately licensed person having the responsibility for the work of an approved maintenance organisation

that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness. A person directly in charge does not need to physically observe and direct each worker constantly but must be available for consultation on matters requiring instruction or decision from higher authority.

(10) *Facility.*—A physical plant, including land, buildings, and equipment, which provide the means for the performance of maintenance, preventive maintenance, or alterations of any article.

(11) *Housing*.—Buildings, hangers, and other structures to accommodate the necessary equipment and materials of a maintenance organisation that—

(*i*) Provide working space for the performance of maintenance, preventive maintenance, or alterations for which the maintenance organisation is approved and rated ; and

(*ii*) Provide structures for the proper protection of aircraft, airframes, aircraft engines, propellers, appliances, components, parts, and subassemblies thereof during disassembly, cleaning, inspection, repair, alteration, assembly, and testing ; and

(*iii*) Provide for the proper storage, segregation, and protection of materials, parts, and supplies.

(12) *Line Maintenance.*—Any unscheduled maintenance resulting from unforeseen events, or scheduled checks that contain servicing and/or inspections that do not require specialised training, equipment, or facilities.

(13) *Maintenance Procedures Manual.*—A document endorsed by the head of the maintenance organisation which details the maintenance organisation's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems. Also referred to as the AMO procedures manual.

(14) *Maintenance Release.*—A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organisation's procedures manual or under an equivalent system.

(15) *Primary Standard.*—A standard defined and maintained by a State Authority and used to calibrate secondary standards.

(16) *Reference Standar* —A standard that is used to maintain working standards.

(17) *Safety Management System*— A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures.

(18) *State Safety Programme.*—An integrated set of regulations and activities aimed at improving safety.

(19) *Secondary Standards.*—A standard maintained by comparison with a primary standard.

(20) *Specialised Maintenance*—Any maintenance not normally performed by an AMO (e.g., tire retreading, plating, etc).

(21) *Standard*—An object, artifact, tool, test equipment, system, or experiment that stores, embodies, or otherwise provides a physical quantity, which serves as the basis for measurement of the quantity. It also includes a document describing the operations and process that must be performed in order for a particular end to be achieved.

(22) *Traceability*—A characteristic of a calibration, analogous to a pedigree. A traceable calibration is achieved when each Measurement Device and Working Standard, in a hierarchy stretching back to the National Standard, was itself properly calibrated, and the results properly

(23) *Transfer Standard.*—Any standard that is used to compare a measurement process, system, or device at one location or level with another measurement process, system or device at another location or level.

Abbreviations.

6.1.1.3.—(*a*) The following abbreviations are used in Part 6.

(1) AAT — Approved Airworthiness Tag.

(2) AMO — Approved Maintenance Organisation.

(3) AME — Aircraft Maintenance Engineer.

(4) ARS — Aviation Repair Specialist.

(5) NDT — Non-Destructive Testing.

(6) PAH — Production Approval Holder.

(7) TSO — Technical Standard Order.

Exemption Authority.

6.1.1.4.—(*a*) The Authority may, upon consideration of the circumstances of a particular maintenance organisation, issue an exemption providing relief from specified sections of this Part, provided that the Authority finds that the circumstances presented warrant the exemption and that a level of safety will be maintained equal to that provided by the rule from which the exemption is sought.

(*b*) An exemption may be terminated or amended at any time by the Authority.

(*c*) A request for exemption must be made in accordance with the requirements in Part 1.

(*d*) Each approved maintenance organisation that receives an exemption must have a means of notifying the appropriate management, certifying staff, and personnel of the exemption.

6.2. CERTIFICATION OF A MAINTENANCE ORGANISATION AND CONTINUED VALIDITY

Applicability.

6.2.1.1.—(*a*) This section prescribes the requirements for the certification of a maintenance organisation and continued validity of the certificate.

General.

6.2.1.2.—(*a*) No person may operate as an approved maintenance organisation without, or in violation of, an approved maintenance organisation certificate, ratings or operations specifications issued under this part.

(*b*) The certificate and operations specifications issued to an approved maintenance organisation must be available on the premises for inspection by the public and the Authority.

(*c*) The approval of an AMO by Nigeria shall be dependent upon the applicant demonstrating compliance with the requirements of this part and relevant provisions contained in Part 20 of these regulations for such organizations.

(*d*) The approval by Nigeria of a foreign maintenance organization holding an AMO certificates from its State of principal operation shall be based on compliance with this Part and the regulations of its home State.

(*e*) A foreign AMO approved by Nigeria requesting for approval of location(s) in Nigeria shall submit an agreement for the provision of maintenance support to Nigerian operator/owner.

Approved Maintenance Organisation Certificate.

6.2.1.3.—(*a*) The AMO certificate shall consist of two documents—

(1) A one page certificate signed by the Authority ; and

(2) A multi-page operations specifications signed by the Accountable Manager and the Authority containing the terms, conditions, and authorisations.

(*b*) An approved maintenance organisation may perform maintenance, preventive maintenance, or alterations on an aircraft, airframe, aircraft engine, propeller, appliance,component, or part thereof only for which it is rated and within the terms, conditions, and authorisations placed in its operations specifications.

(*c*) The AMO certificate shall contain the following items and be in a format as shown in IS : 6.2.1.3—

(1) The certificate number specifically assigned to the AMO ;

(2) The name and location (main place of business) of the AMO ;

(3) The date of issue and period of validity ;

(4) The ratings issued to the AMO ; and

(5) Authority signature.

(*d*) The AMO operations specifications shall contain—

(1) The certificate number specifically assigned to the AMO ;

(2) The class or limited ratings issued in detail, including special approvals and limitations issued ;

(3) The date issued or revised ;

(4) Accountable manager and Authority signatures ; and

(5) The certificate issued to each certificated maintenance organisation must be available in the premises for inspection by the public and the Authority.

(*e*) No person may operate as an approved maintenance organisation without, or in violation of, an approved maintenance organisation certificate issued under this Part.

Advertising.

6.2.1.4.—(*a*) No approved maintenance organisation may advertise as a certificated approved maintenance organisation until an approved maintenance organisation certificate has been issued to that facility.

(*b*) No certificated approved maintenance organisation may make any statement, either in writing or orally, about itself that is false or is designed to mislead any person.

(*c*) Whenever the advertising of an approved maintenance organisation indicates that it is certificated, the advertisement must clearly state the approved maintenance organisation's certificate number.

Application for an AMO Certificate.

6.2.1.5.—(*a*) The Authority will require an applicant for approval of a maintenance organisation to submit the following—

(1) An application in a form and a manner prescribed by the Authority, as contained in IS: 6.2.1.5 ;

(2) Its Maintenance Procedures Manual in duplicate ;

(3) A list of the maintenance functions to be performed for it, under contract, by another AMO ;

(4) A list of all AMO certificates and ratings pertinent to those certificates issued by any contracting State other than Nigeria ;

(5) Documentation of the maintenance organisation's Quality System ; and

(6) Any additional information the Authority requires the applicant to submit.

(*b*) An application for the amendment of an existing AMO certificate shall be made on a form and in a manner prescribed by the Authority. The application shall be signed by the Accountable Manager of the AMO. If applicable, the AMO shall submit the required amendment to the Maintenance Procedures Manual to the Authority for approval.

Issuance of an AMO Certificate.

6.2.1.6.—(*a*) An applicant may be issued an AMO certificate if, after investigation, the Authority finds that the applicant—

(1) Meets the applicable regulations and standards for an AMO certificate,

(2) Is properly and adequately equipped for the performance of maintenance of aircraft or aeronautical product for which it seeks approval ; and

(3) Has paid the fees and charges prescribed by the Authority.

Duration and Renewal of AMO Certificate.

6.2.1.7.—(*a*) A certificate or rating issued to an approved maintenance organisation located either inside or outside Nigeria is effective from the date of issue until :

(1) The last day of the 24th month after the date on which it was issued subject to satisfactory compliance with the requirements of this Part ; or

(2) The approved maintenance organisation surrenders the certificate, or

(3) The Authority suspends or revokes the certificate.

(*b*) The holder of a certificate that expires or is surrendered, suspended, or revoked by the Authority must return the certificate and operations specifications to the Authority within 5 working days of expiration, surrender or receipt from the Authority of notice of suspension or revocation.

(*c*) A certificated approved maintenance organisation that applies for a renewal of its approved maintenance organisation certificate for aircraft registered in Nigeria must submit its request for renewal no later than 90 days before the approved maintenance organisation's current certificate expires. If a request for renewal is not made within this period, the approved maintenance organisation must follow the application procedures for initial issuance as prescribed by the Authority.

Continued Validity of Approval.

6.2.1.8.—(*a*) Unless the approval has previously been surrendered, superseded, suspended, revoked or expired by virtue of exceeding any expiration date that may be specified in the approval certificate, the continued validity of approval is dependent upon—

(1) The AMO remaining in compliance with this Part and with the relevant provisions contained in Part 20 of these regulations for an approved maintenance organization ;

(2) The Authority being granted access to the organisation's facilities to determine continued compliance with this regulation ; and

(3) The payment of any charges prescribed by the Authority.

Inspection.

6.2.1.9.—(*a*) The Authority may, at any time, inspect an AMO holder on the AMO holder's premises to determine the AMO compliance with this Part.

(*b*) Inspections will be conducted at least annually.

(*c*) After an inspection is made, the certificate holder will be notified, in writing, of any deficiencies found during the inspection.

(*d*) Inspection will also be performed on the applicant for, or the holder of an AMO certificate held outside Nigeria. This inspection may be delegated to the Authority of the State where the AMO is located, provided an arrangement exists.

Suspension or Revocation.

6.2.1.10.—The Authority may suspend or revoke an AMO certificate if it is established that a certificate holder has not met, or no longer meets the requirements of Part 6.

Changes to the AMO and

6.2.1.11.—(*a*) To enable the Authority to determine continued compliance with this Part, the AMO shall provide written notification to the Authority either prior to, or within a time period determined by the Authority to be as soon as practicable after, any of the following changes—

(1) The name of the organisation ;

(2) The location of the organisation ;

(3) The housing, facilities, equipment, tools, material, procedures, work scope and certifying staff that could affect the AMO rating or ratings ;

(4) The addition, amendment or deletion of ratings held by the AMO, whether granted by the Authority or held through an AMO certification issued by another contracting State ;

(5) Additional locations of the organisation ;

(6) The accountable manager ;

(7) The suspension, revocation or expiration of a maintenance organisation certificate issued to the AMO by another contracting State ; or

(8) The list of management personnel identified as described in the Maintenance Procedures Manual.

(*b*) The Authority will amend the AMO certificate if the AMO notifies the Authority of a change in—

(1) Location or housing and facilities ;

(2) Additional locations of the organisation ;

(3) Rating, including deletions ;

(4) Name of the organisation with same ownership ; or

(5) Ownership.

(*c*) The Authority may amend the AMO certificate if the AMO notifies the Authority of a change in—

(1) The accountable manager ; or

(2) The list of management personnel identified as described in the Maintenance Procedure Manual.

(*d*) When the Authority issues an amendment to an AMO certificate because of new ownership of the AMO, the Authority will assign a new certificate number to the amended AMO certificate.

(*e*) The Authority may :

(1) Prescribe, in writing, the conditions under which the AMO may continue to operate during any period of implementation of the changes noted in subparagraph (*a*) ; and

(2) Hold the AMO certificate in abeyance if the Authority determines that approval of the AMO certificate shall be delayed; the Authority will notify the AMO certificate holder, in writing, of the reasons for any such delay.

(*f*) If changes are made by the AMO to the items listed in sub-paragraph (*a*) without notification to the Authority and amendment of the AMO certificate by the Authority, the AMO certificate may be suspended, or revoked, by the Authority.

Certificate Ratings of the AMO.

6.2.1.12.—(*a*) The following ratings are issued under this Subpart—

(1) Airframe ratings.

(*i*) Class 1 : Composite construction of small aircraft.

(*ii*) Class 2 : Composite construction of large aircraft.

(*iii*) Class 3 : All-metal construction of small aircraft.

(*iv*) Class 4 : All-metal construction of large aircraft.

(2) Powerplant ratings.

(*i*) Class 1 : Piston engines of 400 horsepower or less.

(*ii*) Class 2 : Piston engines of more than 400 horsepower.

(*iii*) Class 3 : Turbine engines.

(3) Propeller ratings.

(*i*) Class 1 : Fixed-pitch and ground-adjustable propellers of wood metal or, composite construction.

(*ii*) Class 2 : Other propellers, by make.

(4) Avionics/radio ratings.

(*i*) Class 1 : *Communication equipment* : Radio transmitting equipment or receiving equipment, or both, used in aircraft to send or receive communications, regardless of carrier frequency or type of modulation used; including auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic inter-crew signaling devices, and similar equipment; but not including equipment used for navigation of the aircraft or as an aid to navigation, equipment for measuring altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications radio equipment.

(*ii*) Class 2 : *Navigational equipment* : A radio system used in aircraft for en-route, approach navigation, to include the flight director system, except equipment operated on radar or pulsed radio frequency principles, but not including equipment for measuring altitude or terrain clearance or other distance measuring equipment operated on pulsed radio frequency principles.

(*iii*) Class 3 : *Pulsed equipment* : Any aircraft electronic system operated on pulsed radio frequency principles.

(5) Instrument ratings.

(*i*) Class 1 : *Mechanical* : Any diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument that is used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges, drift sights, magnetic compasses, altimeters, or similar mechanical instruments.

(*ii*) Class 2 : *Electrical* : Any self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.

(*iii*) Class 3 : *Gyroscopic* : Any instrument or system using gyroscopic principles and motivated by air pressure or electrical energy, including automatic pilot control units, turn and bank indicators, directional gyros, and their parts, and flux gate and gyrosyn compasses.

(*iv*) Class 4 : *Electronic* : Any instruments whose operation depends on electron tubes, transistors, electronic displays, or similar devices including capacitance type quantity gauges, system amplifiers, and engine analyzers.

(6) Accessory ratings.

(*i*) Class 1 : *Mechanical* : The accessories that depend on friction, hydraulics, mechanical linkage, or pneumatic pressure for operation, including aircraft brakes, mechanically driven pumps, carburetors, aircraft wheel assemblies, shock absorber struts and hydraulic servo units.

(*ii*) Class 2 : *Electrical* : The accessories that depend on electrical energy for operation, and generators, including starters, voltage regulators, electric motors, electrically driven fuel pumps, magnetos, or similar electrical accessories.

(*iii*) Class 3 : *Electronic* : The accessories that depend on the use of an electron tube transistors, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

AMO Limited Ratings.

6.2.1.13.—(*a*) Whenever the Authority finds it appropriate, it may issue a limited rating to an AMO that maintains or alters only a particular type of airframe, powerplant, propeller, radio, instrument, or accessory, or parts thereof, or performs only specialised maintenance requiring equipment and skills not ordinarily found in an AMO. Such a rating may be limited to a specific model aircraft, engine, or constituent part, or to any number of parts made by a particular manufacturer.

(*b*) Limited ratings are issued for—

(1) Airframes of a particular make and model ;

(2) Powerplants of a particular make and model ;

(3) Propellers of a particular make and model ;

(4) Radio equipment of a particular make and model ;

(5) Instruments of a particular make and model ;

(6) Accessories of a particular make and model ;

(7) Landing gear components ;

(8) Floats, by make ;

(9) Non-destructive inspection, testing, and processing ;

(10) Emergency equipment ;

(11) Rotor blades, by make and model ;

(12) Aircraft fabric work ; and

(13) Any other purpose for which the Authority finds the applicant's request appropriate.

(*c*) *Specialised Service Ratings*.—A specialised service rating may be issued to a maintenance organisation to perform specific maintenance or processes. The operating specifications of the approved maintenance organisation must identify the specification used in performing that specialised service. The specification may be—

(1) A civil or military specification that is currently used by industry and approved by the Authority ; or

(2) A specification developed by the approved maintenance organisation and approved by the Authority.

6.2.1.14.—(*a*) The AMO shall establish a quality system and designate a quality manager to monitor compliance with, and adequacy of, procedures required to ensure safe maintenance practices and airworthy aircraft. Compliance monitoring shall include a feedback system to the accountable manager to ensure corrective action as necessary.

(*b*) The quality system, and the quality manager, shall be acceptable to the Authority.

(*c*) Each AMO shall ensure that the quality system includes a quality assurance programme that contains procedures designed to monitor compliance with required aircraft and aircraft component standards and adequacy of the procedures to ensure that such procedures invoke good maintenance practices and airworthy aircraft and aircraft components.

(*d*) The quality assurance system shall include a procedure to initially qualify and periodically perform audits on persons performing work on behalf of the AMO.

(*e*) The quality system shall include a feedback system to the designated management person or group of persons directly responsible for the quality system and ultimately to the Accountable Manager that ensures, as necessary, proper and timely corrective action is taken in response to reports resulting from the independent audits.

(*f*) The AMO's quality system shall be sufficient to review all maintenance procedures, as described in the Maintenance Control Manual and the Maintenance Procedures Manual, in accordance with an approved program once a year.

(*g*) The AMO's quality system shall indicate when audits are due, when completed, and establish a system of audit reports, which can be seen by visiting Authority staff on request. The audit system shall clearly establish a means by which audit reports containing observations about non-compliance or poor standards are communicated to the Accountable Manager.

(*h*) If the AMO is a small organisation, the independent audit part of the quality system may be contracted to another organisation approved under this part or a person with appropriate technical knowledge and proven satisfactory audit experience such as ISO 9000 qualification.

(*i*) Where the AMO is part of an AOC under Part 9, the AOC holder's quality management system may be combined with the requirements of an AMO and submitted for acceptance to the Authority.

(*j*) Each AMO shall describe the quality system in relevant documentation as outlined in IS : 6.2.1.14.

Quality System.

Location of the AMO.

6.2.1.15.—(*a*) *Principal place of business*.—An applicant for, or holder of, a certificated AMO under this Part shall establish and maintain a principal place of business office that is physically located at the address shown on its certificate.

(*b*) *Additional fixed locations*.—An AMO may have additional fixed locations without certificating each facility as a stand-alone AMO, which may be approved by the Authority provided that—

(1) All of the facilities are localised and within a defined area, and

(2) All locations operate under the approval of the AMO certificate and operations specifications.

(*c*) *Foreign locations of AMOs*.—An AMO approved by the Authority may be located in a country outside NIGERIA and is subject to all the applicable requirements of this Part.

6.3. HOUSING, FACILITIES, EQUIPMENT, MATERIALS AND DATA

General.

6.3.1.1.—(*a*) A certificated approved maintenance organisation must provide, housing, facilities, equipment, materials, and data in quantity and quality that meet the standards required for the issuance of the certificate and ratings that the approved maintenance organisation holds.

Housing and Facility Requirements.

6.3.1.2.—(*a*) Housing for the facilities, equipment, materials, and personnel shall be provided appropriate for all planned work ensuring, in particular, protection from weather.

(*b*) All work environments shall be appropriate for the task carried out and shall not impair the effectiveness of personnel.

(*c*) Office accommodation shall be appropriate for the management of planned work including, in particular, the management of quality, planning, and technical records.

(*d*) Specialised workshops and bays shall be segregated, as appropriate, to insure that environmental and work area contamination is unlikely to occur.

(*e*) Storage facilities shall be provided for parts, equipment, tools, and material.

(*f*) Storage conditions shall provide security for serviceable parts, segregate serviceable from unserviceable parts, and prevent deterioration of and damage to stored items.

(*g*) An AMO with an airframe rating shall provide suitable permanent housing to enclose the largest type and model of aircraft listed on its operations specifications.

(*h*) An AMO may perform maintenance, preventive maintenance, or alterations on articles outside of its housing if it provides suitable facilities that are acceptable to the Authority.

(*i*) See IS : 6.3.1.2 for detailed requirements pertaining to housing and facilities.

Equipment, tools and Material.

6.3.1.3.—(*a*) The AMO shall have available the necessary equipment, tools, and material to perform the approved scope of work and these items shall be under full control of the AMO. The availability of equipment and tools means permanent availability except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary.

(*b*) The Authority may exempt an AMO from possessing specific tools and equipment for maintenance or repair of an aircraft or aeronautical product specified in the AMO's approval, if these items can be acquired temporarily, by prior arrangement, and be under the full control of the AMO when needed perform required maintenance or repairs.

(*c*) The AMO shall use the equipment, tools, and material that are recommended by the manufacturer of the article or must be at least equivalent to those recommended by the manufacturer and acceptable to the Authority.

(*d*) The AMO shall control all applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness.

(*e*) The AMO shall ensure that all applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness are calibrated to ensure correct calibration to a standard traceable to a national standard recognized by the Authority.

(*f*) The AMO shall keep all records of calibrations and the standards used for calibration.

(*g*) The IS : 6.3.1.3 contains detailed requirements pertaining to tools, equipment, and test equipment.

6.4. ADMINISTRATION

Personnel Requirement.

6.4.1.1.—(*a*) A management person or group of persons acceptable to the Authority, whose responsibilities include ensuring that the AMO is in compliance with these regulations, shall be nominated.

(*b*) The person or persons nominated as manager shall represent the maintenance management structure of the AMO, and be responsible for all functions specified in Part 6 of these Regulations.

(*c*) Nominated managers shall be directly responsible to an accountable manager who shall be acceptable to the Authority.

(*d*) The AMO shall employ sufficient personnel to plan, perform, supervise and inspect and release the work in accordance with the approval.

(*e*) The competence of personnel involved in maintenance shall be established in accordance with a procedure and to a standard acceptable to the Authority.

(*f*) Each supervisor in the AMO shall be hold an AME licence issued in accordance with Part 2 of these Regulations, Personnel Licensing.

(*g*) The person signing maintenance release or an approval for return to service shall be qualified in accordance with Part 2 of these Regulations, as appropriate to the work performed and shall be acceptable to the Authority.

(*h*) An AMO that uses Aircraft Repair Specialists (ARS) shall ensure that each ARS is employed by the AMO and is licenced in accordance with Part 2 of these Regulations.

(*i*) The maintenance personnel and the certifying staff shall meet the qualification requirements and receive initial, recurrent, and specialised training to their assigned tasks and responsibilities in accordance with a program acceptable to the Authority. The training program established by the AMO shall include training in knowledge and skills related to human performance, including co-ordination with other maintenance personnel and flight crew.

(*j*) See IS : 6.4.1.1 for detailed personnel requirements.

Indoctrination, Initial, Recurrent, Specialised and Remedial Training.

6.4.1.2.—(*a*) An AMO shall have an employee training program approved by the Authority that consists of indoctrination, initial, recurrent training, specialised and remedial training.

(*b*) An AMO shall develop and update its training program based on the job tasks associated with its scope of operating authority and capabilities.

(*c*) The training program shall ensure that each employee assigned to perform maintenance, preventive maintenance, or alterations, and inspection functions is capable of performing the assigned task.

(*d*) An AMO shall submit revisions of its training program to the Authority for approval.

(*e*) An AMO shall document, in a form and manner acceptable to the Authority, the individual employee training required under this section. These training records must be retained for a minimum of two years.

(*f*) An AMO training program shall meet the detailed requirements contained in the IS : 6.4.1.2.

Dangerous Goods Training Programme.

6.4.1.3.—(*a*) An AMO shall have a dangerous goods training program for its employees, whether full time, part time, or temporary or contracted, who are engaged in the following activities :

(1) Loading, unloading or handling of dangerous goods ;

(2) Design, manufacture, fabrication, inspection, marking, maintenance, reconditions, repairs or tests of a package, container or packaging component that is represented, marked, certified, or sold as qualified for use in transporting dangerous goods ;

(3) Preparation of hazardous materials for transport ;

(4) Responsibility for the safety of transportation of dangerous goods ;

(5) Operation of a vehicle used to transport dangerous goods, or

(6) Supervision of any of the above listed items.

(*b*) An AMO employee shall not perform or directly supervise a job function listed in item (*a*) above unless he or she has received the approved dangerous goods training.

(*c*) The AMO training shall ensure that its dangerous goods training—

(1) Ensures that each employee performing or directly supervising any of the job functions specified in item (*a*) above is trained to comply with all applicable procedures ; and

(2) Enables the trained person to recognise items that contain, or ma contain, dangerous goods regulated under these regulations.

(*d*) The dangerous goods training of the AMO shall be approved by the Authority and shall contain the items in IS : 6.4.1.3.

(*e*) An AMO shall document, in a form and manner acceptable to the Authority, the individual employee training required under this section. These training records shall be retained for a minimum of two years.

Rest and Duty Limitations for Persons Performing Maintenance Functions in an AMO.

6.4.1.4.—(*a*) No person may assign, nor shall any person perform maintenance functions for aircraft, unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.

(*b*) No person may schedule a person performing maintenance functions for aircraft for more than 12 consecutive hours of duty.

(*c*) In situations involving unscheduled aircraft unserviceability, persons performing maintenance functions for aircraft may be continued on duty for—

(1) Up to 16 consecutive hours ; or

(2) 20 hours in 24 consecutive hours.

(*d*) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(*e*) The AMO shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive day's period.

Records of Management, Supervisory, Inspection and Certifying Staff.

6.4.1.5.—(*a*) The AMO shall maintain a roster of all management, supervisory, inspection and certifying staff, which includes details of the scope of their authorisation.

(*b*) Certifying staff shall be notified in writing of the scope of their authorisation.

(1) The authorisation document shall be in a style that makes its scope clear to certifying staff and any authorised person that may be required to examine the document. Where codes are used to define scope, an interpretation document shall be readily available.

(2) Certifying staff are not required to carry the authorisation document at all times but shall produce it within a reasonable time of a request from an authorised person.

(*c*) See IS : 6.4.1.5 for detailed requirements pertaining to records of management, supervisory, inspection and certifying staff.

Safety Management System (SMS).

6.4.1.6.—(*a*) An AMO shall implement a safety management system acceptable to the Authority as outlined in Part 20 of these regulations.

6.5. AMO OPERATING RULES

Maintenance Procedures Manual.

6.5.1.1.—(*a*) Each AMO shall have an AMO Procedures Manual.

(*b*) The AMO Procedures Manual shall :

(1) provide clear guidance to personnel on how the activities included in the airworthiness authority approval are managed, on their personal responsibilities and on how compliance with the appropriate continuing airworthiness requirements is achieved ;

(2) include a statement of the organisation's policies and objectives.

(*c*) If AMO is also the AOC, the AMO's procedures manual and the AOC's maintenance control manual may be combined.

(*d*) An AMO Maintenance Procedures Manual and any subsequent amendments thereto shall be approved by the Authority prior to use.

(*e*) The AMO Maintenance Procedures Manual shall specify the scope of work required of the AMO in order to satisfy the relevant requirements needed for an approval of an aircraft or aeronautical product for return to service.

(*f*) The AMO Maintenance Procedures Manual and any other manual it identifies must :

(1) Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety ;

(2) Be in a form that is easy to revise and contain a system which allows personnel to determine current revision status ;

(3) Have the date of the last revision printed on each page containing the revision ;

(4) Not be contrary to any applicable Nigerian regulation or the AMO's specific operating provisions ;

(5) Include a reference to appropriate civil aviation regulations ; and

(6) be amended as necessary to keep the information contained therein up to date.

(*g*) Copies of all amendments to the Maintenance Procedures Manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

(*h*) The AMO shall provide an approved Maintenance Procedures Manual for use by the organisation, containing the following information—

(1) A statement signed by the accountable manager confirming that the maintenance organisation. Maintenance Procedures Manual and any associated manuals define the AMO's compliance with this regulation and shall be complied with at all times.

(2) A procedure to establish and maintain a current list of the titles and names of the management personnel accepted by the Authority. The list of personnel may be separate from the Maintenance Procedures Manual but must be kept current and available for review by the Authority when requested.

(3) A list which describes the duties and responsibility of the management personnel and the matters on which they may deal directly with the Authority on behalf of the AMO.

(4) An organisation chart showing associated chains of responsibility of the management personnel.

(5) A procedure to establish and maintain a current roster of certifying personnel.

(6) A description of the procedures used to establish the competence of maintenance personnel.

(7) A general description of manpower resources.

(8) A description of the method used for the completion and retention of the maintenance records.

(9) A description of the procedure for preparing the maintenance release and the circumstances under which the release is to be signed.

(10) A description, when applicable, of additional procedures for complying with an AOC holder's maintenance procedures and requirements.

(11) A description of the procedures for complying with the service information reporting requirement contained in section 6.5.1.10.

(12) A description of the procedure for receiving, amending and distributing within the maintenance organisation all necessary airworthiness data from the type certificate holder or the type design organisation.

(13) A general description of the facilities located at each address specified in the AMO's approval certificate.

(14) A general description of the AMO's scope of work relevant to the extent of approval.

(15) The notification procedure for AMO to use when requesting the approval of changes to the organisation of the AMO from the Authority.

(16) The amendment procedure for the AMO Maintenance Procedures Manual, including the submission to the Authority.

(17) The AMO's procedures, acceptable to the Authority, to ensure good maintenance practices and compliance with all relevant requirements in this subsection.

(18) The AMO's procedures to establish and maintain an independent quality system to monitor compliance with the adequacy of the procedures to ensure good quality maintenance practices and airworthy aircraft and aeronautical products. Compliance monitoring must include a feedback system to the person or group of persons specified in 6.4.1.1, and ultimately to the accountable manager to ensure, as necessary, corrective action. Such a system shall be acceptable to the Authority.

(19) A list of operators, if appropriate, to which the AMO provides an aircraft maintenance service.

(20) A list of organisations performing maintenance on behalf of the AMO.

(21) A list of the AMO's line maintenance locations and procedures, if applicable.

(*e*) See IS : 6.5.1.1 for detailed requirements concerning the Maintenance Procedures Manual and a sample Maintenance Procedures Manual format.

Maintenance Inspection Procedures and Quality Assurance Systems.

6.5.1.2.—(*a*) The AMO shall establish procedures, acceptable to the Authority, which ensure good maintenance practices and compliance with all relevant requirements of this Part.

(*b*) The AMO shall ensure compliance with this paragraph by either :

(1) Establishing an independent quality assurance system to monitor compliance with and adequacy of the procedures ; or

(2) Establishing a system of inspection to ensure that all maintenance is properly performed.

(*c*) AMO's using an independent quality assurance system shall include the audit procedures listed in the AMO Procedures Manual at IS 6.5.1.1.

Capability List.

6.5.1.3.—(*a*) Each approved maintenance organisation must prepare and retain a current capability list approved by the Authority. The approved maintenance organisation may not perform maintenance, preventive maintenance, or alterations on an article until the article has been listed on the capability list in accordance with this Part.

(*b*) The capability list must identify each article by make and model, part number, or other nomenclature designated by the article's manufacturer.

(*c*) An article may be listed on the capability list only if the article is within the scope of the ratings and classes of the approved maintenance organisation's certificate, and only after the approved maintenance organisation has performed a self-evaluation in accordance with 6.5.1.1(*d*). The approved maintenance organisation must perform the self-evaluation described in this paragraph to determine that the maintenance organisation has all of the facilities, equipment, material, technical data, processes, housing, and trained personnel in place to perform the work on the article as required by this part. If the approved maintenance organisation makes that determination, it may list the article on the capability list.

(*d*) The document of the evaluation described in paragraph (*c*) of this section must be signed by the accountable manager and must be retained on file by the approved maintenance organisation.

(*e*) Upon listing an additional article on its capability list, the maintenance organisation must send a copy of the list to the Authority having jurisdiction over the approved maintenance organisation.

(*f*) The capability list(s) must be available in the premises for inspection by the public and the Authority.

(*g*) The self-evaluations must be available in the premises for inspection by the Authority.

(*h*) The AMO shall retain the capability list(s) and self-evaluation(s) for two years from the date accepted by the accountable manager.

Contract Maintenance.

6.5.1.4.—(*a*) The AMO must be approved for the work which is to be subcontracted and have the capability to assess the competence of the subcontractor.

(*b*) An AMO may contract a maintenance function pertaining to an article to an outside source provided :

(1) The Authority approved the maintenance function to be contracted to the outside source ; and

(2) The AMO maintains and makes available to the Authority in a format acceptable to the Authority, the following information—

(*i*) The maintenance functions contracted to each outside facility, and

(*ii*) The name of each outside facility to whom the AMO contracts maintenance functions and the type of certificate and ratings, if any, held by each facility.

(*c*) An AMO may contract a maintenance function pertaining to an article to a unlicensed person provided—

(1) The unlicensed person follows a quality control system equivalent to the system followed by the AMO ;

(*i*) The AMO remains directly in charge of the work performed by the unlicensed person ; and (*ii*) The AMO verifies, by test and/or inspection, that the work has been performed satisfactorily by the unlicensed person and that the article is airworthy before approving it for return to service.

(*d*) The AMO, before approval for return to service, shall verify by test or inspection that the work has been performed satisfactorily following contract maintenance, preventive maintenance, or alterations in accordance with approved methods.

Privileges of the Approved Maintenance Organisation.

6.5.1.5.—(*a*) The AMO shall carry out the following tasks as permitted by and in accordance with the AMO Maintenance Procedures Manual—

(1) Maintain any aircraft or aeronautical product for which it is rated at the location identified in the approval certificate ;

(2) Maintain any aircraft for which it is rated at any location subject to the need for such maintenance arising from unserviceability of the aircraft ;

(3) Perform the activities in support of a specific AOC holder where that AOC has requested the services of the AMO at locations other than the location identified on the AMO certificate and the AMO has been rated to maintain the aircraft of that specific AOC holder at the requested location in the AMO operating provisions approved by the Authority ; and

(4) Issue an approval for return to service or a maintenance release in respect of subparagraphs (*a*) (1), (2), and (3) of this subsection upon completion of maintenance in accordance with limitations applicable to the AMO.

(*b*) The AMO may maintain or alter any article for which it is rated at a place other than the AMO, if—

(1) The function would be performed in the same manner as when performed at the AMO and in accordance with this Subpart ;

(2) All necessary personnel, equipment, material, and technical and/or approved standards are available at the place where the work is to be done ; and

(3) The Maintenance Procedures Manual of the AMO sets forth approved procedures governing work to be performed at a place other than the AMO.

Limitations on the AMO.

6.5.1.6.—(*a*) The AMO shall maintain an aircraft or aeronautical product for which it is approved only when all necessary housing, facilities, equipment, tools, material, approved technical data and certifying staff are available.

(*b*) An AMO may not contract out the maintenance, preventive maintenance, or alteration of a complete type-certificated product.

(*c*) An AMO may not provide approval for return to service of a product following contract maintenance, preventive maintenance, or alterations without verifying by test or inspection that the work has been performed satisfactorily in accordance with approved methods.

Certification of Release to Service of an Aircraft, Part, Component of Assembly.

6.5.1.7.—(*a*) A certification of release to service shall be issued by appropriately authorised certifying staff when satisfied that all required maintenance of the aircraft has been properly carried out by the AMO in accordance with the approved data and the AMO Maintenance Procedures Manual.

(*b*) A certification of release is required at the completion of any maintenance on an aircraft part, component or assembly when off the aircraft.

(*c*) The release to service to be used for release of an aircraft or aeronautical part, component or assembly shall adhere to the following items—

(1) The certification of release to service shall contain the following statement : Certifies that the work specified was carried out in accordance with current regulations and in respect to that work the aircraft/aircraft component is considered approved for release to service.

(2) The certification of release to service shall reference the data specified in the manufacturer's maintenance instructions or instructions for continued airworthiness.

(3) Where instructions include a requirement to insure that a dimension or test figure is within a specific tolerance as opposed to a general tolerance, the dimension or test figure shall be recorded unless the instruction permits the use of GO/NO gauges. It is not normally sufficient to state that the dimension or the test figure is within tolerance.

(4) The date such maintenance was carried out shall include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/landings, etc., as appropriate.

(5) When extensive maintenance has been carried out, it is acceptable for the certification of release to service to summarise the maintenance as long as there is a cross-reference to the work package containing full details of maintenance carried out. Dimensional information shall be retained in the work package record.

(6) The person issuing the release to service shall use a full signature and preferably a certification stamp except in the case where a computer release to service system is used. In this latter case, the Authority will need to be satisfied that only the particular person can electronically issue the release to service.

(7) One such method of compliance with item (*c*)(6) is the use of a magnetic or optical personal card in conjunction with a personal identity number (PIN) which is keyed into the computer and known only to the individual.

(*d*) An aeronautical product which has been maintained off the aircraft requires the issue of a certificate of release to service (NCAA Form One) for such maintenance and another certificate of release to service of the aircraft in regard to maintenance being properly accomplished on the aircraft. The release to service of the aircraft shall be made by the AMO in the aircraft technical log maintenance records section.

(*e*) When a part of component is released to service, the AMO shall complete NCAA Form One as contained in IS : 6.5.1.7.

Maintenance Records.

6.5.1.8.—(*a*) The AMO shall record, in a form acceptable to the Authority, all details for maintenance work performed.

(*b*) The AMO shall provide a copy of each certificate of release to service to the aircraft operator, together with a copy of any specific airworthiness data used for repairs/alterations performed.

(*c*) The AMO shall retain a copy of all detailed maintenance records and any associated airworthiness data for two years from the date the aircraft or aeronautical product to which the work relates was released from the AMO.

(*d*) Each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft/aeronautical product shall make an entry in the maintenance record of that equipment :

(1) A description and reference to data acceptable to the Authority of work performed.

(2) The date of completion of the work performed.

(3) The name of the person performing the work if other than the person specified in this subsection.

(4) If the work performed on the aircraft/aeronautical product has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work.

(5) The authorised signature, the AMO certificate number, and kind of licence held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof.

(6) The signature constitutes the approval for return to service only for the work performed.

(7) In addition to the entry required by this paragraph, major repairs and major alterations shall be entered on a form, and the form disposed of by the person performing the work, in the manner prescribed by the Authority in Part 5 : 5.7.1.1.

(*e*) No person shall describe in any required maintenance entry or form an aircraft or aeronautical component as being overhauled unless—

(1) Using methods, techniques, and practices acceptable to the Authority, it has been disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled ; and

(2) It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under a TSO.

(*f*) No person may describe in any required maintenance entry or form, an aircraft or other aeronautical product as being rebuilt unless it has been—

(1) Disassembled, cleaned, inspected as permitted ;

(2) Repaired as necessary ; and

(3) Reassembled and tested to the same tolerances and limits as a new item, using either new parts or used parts that either conforms to new part tolerances and limits, or to approved oversized or undersized dimensions.

(*g*) No person may approve for return to service any aircraft or aeronautical product that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless—

(1) The appropriate maintenance record entry has been made ; and

(2) The repair or alteration form authorised by or furnished by the Authority has been executed in a manner prescribed by the Authority ;

(*h*) If a repair or alteration results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data shall be appropriately revised and set forth as prescribed by the Authority.

(*i*) *Maintenance record entries for inspections*.—The person approving or disapproving for return to service an aircraft/aeronautical product, after any inspection performed in accordance with this regulation, shall make an entry in the maintenance record of that equipment containing the following information—

(1) The type of inspection and a brief description of the extent of the inspection ;

(2) The date of the inspection and aircraft total time in service ;

(3) The authorised signature, the AMO certificate number, and kind of licence held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof ;

(4) If the aircraft is found to be airworthy and approved for return to service, the following or a similarly worded statement—I certify that this aircraft has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition ;

(5) If the aircraft is not approved for return to service because of needed maintenance, noncompliance with the applicable specifications, airworthiness directives, or other approved data, the following or a similarly worded statement-I certify that this aircraft has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator ; and

(6) If an inspection is conducted under an inspection program provided for in this regulation, the entry shall identify the inspection program accomplished, and contains a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(*j*) *Listing of Discrepancies*.—If the person performing any inspection required by this regulation finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, airworthiness directives, or other approved data upon which its airworthiness depends, that person shall give the owner or lessee a signed and dated list of those discrepancies.

Airworthiness Data - Instructions for Continued Airworthiness.

6.5.1.9.—(*a*) The AMO shall be in receipt of all airworthiness data appropriate to support the work performed from the Authority, the aircraft/ aeronautical product design organisation, and any other approved design organisation in the State of Manufacture or State of Design, as appropriate.

(*b*) Where the AMO modifies airworthiness data specified in paragraph (*a*) to a format or presentation more useful for its maintenance activities, the AMO shall submit to the Authority an amendment to the Maintenance Procedures Manual for any such proposed alterations for acceptance.

(*c*) All airworthiness data used by the AMO shall be kept current and made available to all personnel who require access to that data to perform their duties.

(*d*) The IS : 6.5.1.9 contains detailed requirements concerning airworthiness data.

(*e*) The Authority may classify data from another authority or organisation as mandatory and may require the AMO to hold such data.

Reporting of Unairworthy Conditions.

6.5.1.10.—(*a*) The AMO shall report to the Authority and the aircraft design organisation of the State of Design any identified condition that could present a serious hazard to the aircraft.

(*b*) Reports shall be made on a form and in a manner prescribed by the Authority and contain all pertinent information about the condition known to the AMO. The report shall contain at least the following items—

(1) Aircraft registration number.

(2) Type, make and model of the article.

(3) Date of the discovery of the failure, malfunction, or defect.

(4) Time since last overhaul, if applicable.

(5) Apparent cause of the failure, malfunction, or defect.

(6) Other pertinent information that is necessary for more complete identification, determination of seriousness, or corrective action.

(*c*) Where the AMO is contracted by an AOC holder to carry out maintenance, that AMO shall report to the AOC holder any condition affecting the aircraft or aeronautical product.

(*d*) Reports shall be made as soon as practicable, but in any case within three days of the AMO identifying the condition to which the report relates.

Authority to Conduct Inspections.

6.5.1.11.—(*a*) Each certificated approved maintenance organisation must allow the Authority to inspect that approved maintenance organisation and any of its contract maintenance facilities at any time to determine compliance with this part. Arrangements for maintenance, preventive maintenance, or alterations by a contractor must include provisions for inspections of the contractor by the Authority.

AMO Performance Standards.

6.5.1.12.—(*a*) Each certificated approved maintenance organisation that performs any maintenance, preventive maintenance, alterations for an air operator certificated under Part 9 of these Regulations having an approved maintenance program under Part 9.4.1.12 and approved continuous maintenance program under Part 9.4.1.13 shall perform that work in accordance with the AOC holder's manuals.

(*b*) Except as provided in paragraph (*a*), each certificated approved maintenance organisation shall perform its maintenance and alteration operations in accordance with the applicable standards in Part 5 of these Regulations, Airworthiness. It shall maintain, in current condition, all manufacturer's service manuals, instructions, and service bulletins that relate to the articles that it maintains or alters.

(*c*) In addition, each certificated approved maintenance organisation with an avionics rating shall comply with those sections in Part 5 of these Regulations that apply to electronic systems, and shall use materials that conform to approved specifications for equipment appropriate to its rating. It shall use test apparatus, shop equipment, performance standards, test methods, alterations, and calibrations that conform to the manufacturer's specifications or instructions, approved specification, and if not otherwise specified, to accepted good practices of the aircraft avionics industry.

IS 6.2.1.3.—(*a*) The following is an AMO Certificate.

[NIGERIAN CIVILAVIATION AUTHORITY]

APPROVED MAINTENANCE ORGANISATION CERTIFICATE (*Number*)

This certificate is issued to

Whose business address is

Upon finding that its organisation complies in all respects with the requirements of the Civil Aviation Regulations Part 6, relating to the establishment of an Approved Maintenance Organisation and is empowered to operate an Approved Maintenance Organisation.

With the following ratings :

This certificate shall continue in effect until [DATE] *unless cancelled, suspended, or revoked.*

Date Issued	*Designation*

For : NIGERIAN CIVIL AVIATION AUTHORITY

This Certificate is not Transferable and must be displayed to the Public in the Principal Business Office of the Organisation

APPLICATION FOR AN AMO CERTIFICATE.

IS 6.2.1.5.—(*a*) The following application may be used for an AMO certificate.

<table>
<tr><td colspan="3">NIGERIAN CIVIL AVIATION AUTHORITY</td><td colspan="2">Application for Approved Maintenance Organisation Certificate and/or Ratings</td></tr>
<tr><td colspan="4">1. Approved Maintenance Organisation, Name, Number, Location and Address</td><td>2. Reasons for Submission</td></tr>
<tr><td colspan="3">(a) Official Name of Approved Maintenance Organisation</td><td>Number :</td><td rowspan="4">☐ Original Application for Certificate and Rating
☐ Change in Rating
☐ Change in Location or Housing and Facilities
☐ Change in Ownership
☐ Other (Specify)
____
____
____
____
________________________</td></tr>
<tr><td colspan="4">(b) Location where business is conducted :</td></tr>
<tr><td colspan="4">(c) Official Mailing Address of Approved Maintenance Organisation (Number , Street, City, Nigeria & Postal Code</td></tr>
<tr><td colspan="4">(d) Doing Business As :</td></tr>
<tr><td colspan="5">3. Ratings Applied for :</td></tr>
<tr><td>☐ Airframe
☐ Class 1
☐ Class 2
☐ Class 3
☐ Class 4</td><td>☐ Powerplant
☐ Class 1
☐ Class 2
☐ Class 3</td><td>☐ Propeller
☐ Class 1
☐ Class 2</td><td>☐ Avionics/ Radio
☐ Class 1
☐ Class 2
☐ Class 3</td><td>☐ Instrument/
☐ Class 1
☐ Class 2
☐ Class 3
☐ Class 4</td></tr>
<tr><td>☐ Accessories
☐ Class 1
☐ Class 2
☐ Class 3</td><td>☐ Limited
☐ Airframe
☐ Powerplant
☐ Propeller
☐ Instruments</td><td>☐ Accessories
☐ Landing Gear
☐ Floats
☐ Avionics/radio</td><td>☐ Rotor Blades
☐ Fabric
☐ Emergency Equip
☐ Non-Destructive Test
☐ Other</td><td>☐ Specialised Service (List Process Specification(s))</td></tr>
<tr><td colspan="5">4. List of Maintenance Functions contracted to an outside Maintenance Organisation :</td></tr>
<tr><td colspan="5">5. Applicants Certification</td></tr>
<tr><td colspan="5">Name of Owner (Include name(s) of individual Owner, all partners, or corporation name given the Nigeria, province, or country and date of incorporation.</td></tr>
<tr><td colspan="5">I hereby certify that I have been authorised by the approved maintenance organisation identified in Item 1 above to make this application and that statements attached hereto are true and correct to the best of my knowledge.</td></tr>
<tr><td>Date:</td><td>Authorised Signature:</td><td colspan="2">Print Name of Authorised Signature:</td><td>Title:</td></tr>
</table>

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<table>
<tr><td colspan="2">For NCAA Use Only</td><td colspan="2">Record of Action
Approved Maintenance Organisation
Inspection</td><td colspan="2">For NCAA Use Only</td></tr>
<tr><td colspan="6">6. Remarks (Identify by item number. Include deficiencies found and ratings denied)</td></tr>
<tr><td colspan="4">7. Findings - Recommendations

A. AMO was found to comply with requirements of Part 6.
B. AMO was found to comply with requirements of Part 6, except for deficiencies listed in Item 6.
C. Recommend Certificate with rating applied for on application be issued.
D. Recommend Certificate with rating applied for on application (EXCEPT those listed in Item 6) be issued.</td><td colspan="2">8. Date of Inspection</td></tr>
<tr><td colspan="2">9. NCAA Office</td><td colspan="2">Signature(s) of Inspector(s)</td><td colspan="2">Printed Names of Inspectors</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="6">10. Supervising or Assigned Inspector</td></tr>
<tr><td rowspan="2">ACTION TAKEN

APPROVED
As shown on certificate issued on date shown

DISAPPROVED</td><td colspan="2">CERTIFICATE ISSUED
Number</td><td colspan="3">Inspector’s Signature</td></tr>
<tr><td colspan="2">Date</td><td colspan="2">Inspector’s Printed Name</td><td>Title</td></tr>
</table>

AMO Form AC-AWS006B

IS 6.2.1.14.—(*a*) In order to show compliance with 9.2.2.3, an AMO shall establish its quality system in accordance with the instruction and information contained in the following paragraphs. Quality System.

1.0. GENERAL

1.1.1. An AMO shall establish a formal, written quality policy statement that is a commitment by the Accountable Manager as to what the quality system is intended to achieve. The quality policy shall reflect the achievement and continued compliance with the Regulations together with any additional standards specified by the AMO. Quality Policy.

1.1.2. The Accountable Manager is an essential part of the AMO management organisation. The term "Accountable Manager" is intended to mean the Chief Executive/President/Managing Director/General Manager, etc. of the AMO, who by virtue of his or her position has overall responsibility (including financial) for managing the organisation.

1.1.3. The Accountable Manager shall have overall responsibility for the AMO quality system, including the frequency, format and structure of the internal management evaluation activities as prescribed in paragraph 3.9 below.

1.2.1. The quality system shall enable the AMO to monitor compliance with these Regulations, the AMO's manual system, and any other standards specified by the AMO or the Authority, to ensure safe operations and airworthy aircraft. Purpose of the Quality System.

1.3.1. The function of the Quality Manager is to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy aircraft as required by these Regulations may be carried out by more than one person by means of different, but complementary, quality assurance programs. Quality Manager.

1.3.2. The primary role of the Quality Manager is to verify, by monitoring activity in the field of, maintenance, that the standards required by the Authority, and any additional requirements defined by the AMO, are being carried out under the supervision of the relevant required management personnel.

1.3.3. The Quality Manager shall be responsible for ensuring that the quality assurance programme is properly established, implemented and maintained.

1.3.4. The Quality Manager shall :

(*a*) Report to the Accountable Manager ;

(*b*) Not be one of the required management personnel ; and

(*c*) Have access to all parts of the AMO's, and as necessary, any sub-contractor's organisation.

1.3.5. In the case of small AMO's, the posts of the Accountable Manager and Quality Manager may be combined, subject to the Authority's acceptance of the action.

2.0. Quality System.

Introduction.

2.1.1. The AMO's quality system shall ensure compliance with and adequacy of operational and maintenance activities requirements, standards, and procedures.

2.1.2. The AMO shall specify the basic structure of the quality system applicable to the operation.

2.1.3. The quality system shall be structured according to the size and complexity of the organisation to be monitored.

Scope.

2.2.1. As a minimum, the quality system shall address the following :

(*a*) The provisions of these Regulations ;

(*b*) The AMO's additional standards and operating practices ;

(*c*) The AMO's quality policy ;

(*d*) The AMO's organisational structure ;

(*e*) Responsibility for the development, establishment and management of the quality system ;

(*f*) Documentation, including manuals, reports and records ;

(*g*) Quality procedures ;

(*h*) Quality assurance program ;

(*i*) The required financial, material and human resources ;

(*j*) Training requirements.

2.2.2. The quality system shall include a feedback system to the accountable manager to ensure that corrective actions are both identified and promptly addressed. The feedback system shall also specify who is required to rectify discrepancies and non-compliance in each particular case, and the procedure to be followed if corrective action is not completed within an appropriate timescale.

Relevant Documentation.

2.3.1. Relevant documentation includes the relevant part of the operator's manual system.

(1) In addition, relevant document shall include the following :

(*a*) Quality policy ;

(*b*) Terminology ;

(*c*) Specified maintenance standards ;

(*d*) A description of the organisation ;

(*e*) The allocation of duties and responsibilities ;

(*f*) Operational procedures to ensure regulatory compliance ;

(*g*) Accident prevention and flight safety programme ;

(*h*) The quality assurance programme, reflecting ;

(2) Schedule of the monitoring process ;

(3) Audit procedures ;

(4) Reporting procedures ;

(5) Follow-up and corrective action procedures ;

(6) Recording system ;

(7) The training syllabus ; and

(8) Document control.

3.0. Quality Assurance Programme.

3.1.1. The quality assurance programme shall include all planned and systematic actions necessary to provide confidence that all maintenance is conducted in accordance with all applicable requirements, standards and procedures. Introduction.

3.1.2. When establishing a quality assurance programme, consideration shall be given to at least the following :

(*a*) Quality inspection ;

(*b*) Audit ;

(*c*) Auditors ;

(*d*) Auditor's independence ;

(*e*) Audit scope ;

(*f*) Audit scheduling ;

(*g*) Monitoring and corrective action ;

(*h*) Management evaluation.

3.2.1. The primary purpose of a quality inspection is to observe a particular event/action/document, etc. in order to verify compliance with established procedures, requirements and the required standard. Quality Inspection.

3.2.2. Subject areas for quality inspections are :

(1) Facilities size and segregation ;

(2) Office accommodation ;

(3) Work environment ;

(4) Storage ;

(5) Management changes ;

(6) Staff numbers and man-hour plan ;

(7) Competence process ;

(8) Qualifying certifying staff ;

(9) Records of certifying staff ;

(10) Issue of authorisations ;

(11) Adequate equipment ;

(12) Equipment control and calibration ;

(13) Approved data held ;

(14) Modified maintenance data ;

(15) Data availability ;

(16) Data up to date ;

(17) Aircraft release ;

(18) Release document contents ;

(19) Release control

(20) Details on work documents ;

(21) Operator’s copy of release ;

(22) Record retention ;

(23) Reporting unairworthy findings ;

(24) Clear work orders ;

(25) Procedures per Maintenance Procedures Manual ;

(26) Suppliers and subcontractors ;

(27) Acceptance of parts ;

(28) Parts control in stores ;

(29) Use of tools ;

(30) Cleanliness standards ;

(31) Control of repairs ;

(32) Aircraft Maintenance Programme completion ;

(33) Airworthiness directive control ;

(34) Control of alterations ;

(35) Control of working documents ;

(36) Base maintenance defects ;

(37) Defective parts to stores ;

(38) Parts to outside contractors ;

(39) Computer maintenance systems ;

(40) Engine running ;

(41) Aircraft procedures ;

(42) Line maintenance control parts ;

(43) Line servicing control ;

(44) Line defect control ;

(45) Aircraft Technical Log - Maintenance Records section completion ;

(46) Pool and loan parts ;

(47) Return defective parts to base ;

(48) Product maintenance exemption control ;

(49) Procedures deviation control ;

(50) Special services control (NDI) ;

(51) Contractors working teams ;

(52) Product audit ;

(53) Privileges and locations control ;

(54) Limitation control ;

(55) Control of changes.

3.2.3. Acceptable methods for quality inspections for maintenance are :

(*a*) *Product sampling* - the part inspection of a representative sample of the aircraft fleet ;

(*b*) *Defect sampling* - the monitoring of defect rectification performance ;

(*c*) *Concession sampling* - the monitoring of any concession to not carry out maintenance on time ;

3.3.1. An audit is a systematic, and independent comparison of the way in which an operation is being conducted against the way in which the published operational procedures say it must be conducted. Audit.

3.3.2. Audits shall include at least the following quality procedures and processes :

(*a*) A statement explaining the scope of the audit ;

(*b*) Planning and preparation ;

(*c*) Gathering and recording evidence ; and

(*d*) Analysis of the evidence.

3.3.3. Techniques that contribute to an effective audit are :

(*a*) Interviews or discussions with personnel ;

(*b*) A review of published documents ;

(*c*) The examination of an adequate sample of records ;

(*d*) The witnessing of the activities that make up the operation ; and

(*e*) The preservation of documents and the recording of observations.

Auditors.

3.4.1. An AMO shall decide, depending upon the complexity of the organisation, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team shall have relevant maintenance experience.

3.4.2. The responsibilities of the auditors shall be clearly defined in the relevant documentation.

Auditor's Independence.

3.5.1. Auditors shall not have any day-to-day involvement in the area of the maintenance activity that is to be audited. An AMO may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities by the use of part-time auditors. An AMO whose structure and size does not justify the establishment of full-time auditors, may undertake the audit function by the use of part-time personnel from within its own organisation or from an external source under the terms of an agreement acceptable to the Authority. In all cases the AMO shall develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist is familiar with the type of operation and/or maintenance conducted by the operator.

3.5.2. The AMO's quality assurance programme shall identify the persons within the company who have the experience, responsibility and authority to :

(*a*) Perform quality inspections and audits as part of on-going quality assurance ;

(*b*) Identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings ;

(*c*) Initiate or recommend solutions to concerns or findings through designated reporting channels ;

(*d*) Verify the implementation of solutions within specific timescales ;

(*e*) Report directly to the quality manager.

Audit Scope.

3.6.1. AMO's are required to monitor compliance with the operational and maintenance procedures they have designed to ensure safe operations, airworthy aircraft and the serviceability of both operational and safety equipment. In doing so they shall as a minimum, and where appropriate, monitor :

(*a*) Organisation ;

(*b*) Plans and company objectives ;

(*c*) AMO certification (AMO/Operations specifications) ;

(*d*) Supervision ;

(*e*) Manuals, logs, and records ;

(*f*) Duty time limitations, rest requirements, and scheduling ;

(*g*) Maintenance programmes and continued airworthiness ;

(*h*) Airworthiness directives management ;

(*i*) Maintenance accomplishment ;

(*j*) Defect deferral ;

(*k*) Dangerous goods ;

(*l*) Security ;

(*m*) Training.

Audit Scheduling.

3.7.1. A quality assurance program shall include a defined audit schedule and a periodic review cycle area by area. The schedule shall be flexible, and allow unscheduled audits when trends are identified. Follow-up audits shall be scheduled when necessary to verify that corrective action was carried out and that it was effective.

3.7.2. An AMO shall establish a schedule of audits to be completed during a specified calendar period. All aspects of the operation shall be reviewed within every 12 month period in accordance with the programme unless an extension to the audit period is accepted as explained below. An AMO may increase the frequency of audits at its discretion but shall not decrease the frequency without the approval of the Authority. Audit frequency shall not be decreased beyond a 24 month period interval.

3.7.3. When an AMO defines the audit schedule, significant changes to the management, organisation, operation, or technologies shall be considered as well as changes to the regulatory requirements.

Monitoring and Corrective Action.

3.8.1. The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby to ensure that defined policy and maintenance standards are continuously complied with. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up. The AMO shall establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity shall be aimed at eliminating the causes of unsatisfactory performance.

3.8.2. Any non-compliance identified as a result of monitoring shall be communicated to the manager responsible for taking corrective action or, if appropriate, the accountable manager. Such non-compliance shall be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.

3.8.3. The quality assurance programme shall include procedures to ensure that corrective actions are taken in response to findings. These quality procedures shall monitor such actions to verify their effectiveness and that they have been completed. Organisational responsibility and accountability for the implementation of corrective action resides with the department cited in the report identifying the finding. The accountable manager shall have the ultimate responsibility for resourcing the corrective active action and ensuring, through the quality manager, that the corrective action has re-established compliance with the standard required by the Authority, and any additional requirements defined by the operator.

3.8.4. Corrective action. Subsequent to the quality inspection/audit, the AMO shall establish :

(*a*) The seriousness of any findings and any need for immediate corrective action ;

(*b*) The origin of the finding ;

(*c*) What corrective actions are required to ensure that the non-compliance does not recur ;

(*d*) A schedule for corrective action ;

(*e*) The identification of individuals or departments responsible for implementing corrective action ;

(*f*) Allocation of resources by the accountable manager, where appropriate.

3.8.5. The quality manager shall :

(*a*) Verify that corrective action is taken by the manager responsible in response to any finding of non-compliance ;

(*b*) Verify the corrective action includes the elements outlined in paragraph 3.8.4 above ;

(*c*) Monitor the implementation and completion of corrective action ;

(*d*) Provide management with an independent assessment of corrective action ; implementation and completion ; and

(*e*) Evaluate the effectiveness of corrective action through follow-up process.

Management Evaluation.

3.9.1. A management evaluation is a comprehensive, systematic, documented review by the management of the quality system, policies and procedures, and shall consider :

(*a*) The results of quality inspections, audits and any other indicators ; and

(*b*) The overall effectiveness of the management organisation in achieving stated objectives.

3.9.2. A management shall identify and correct trends, and prevent, where possible, future non-conformities. Conclusions and recommendations made as a result of an evaluation shall be submitted in writing to the responsible manager for action. The responsible manager shall be an individual who has the authority to resolve issues and take action.

3.9.3. The accountable manager shall decide upon the frequency, format and structure of internal management evaluation activities.

Recording.

3.10.1. Accurate, complete and readily accessible records documenting the results of the quality assurance programme shall be maintained by the AMO. Records are essential data to enable an operator to analyse and determine the root causes of non-conformity, so that areas of non-compliance can be identified and addressed.

3.10.2. The following records shall be retained for a period of 5 years :

(*a*) Audit schedules ;

(*b*) Quality inspection and audit reports ;

(*c*) Responses to findings ;

(*d*) Corrective action reports ;

(*e*) Follow-up and closure reports ; and

(*f*) Management evaluation reports.

4.0. QUALITY ASSURANCE RESPONSIBILITY FOR SUB-CONTRACTORS.

Sub-Contractors.

4.1.1. AMO's may decide to sub-contract out certain activities to external agencies for the provision of services related to areas such as :

(*a*) Maintenance ;

(*b*) Training ; and

(*c*) Manual preparation.

4.1.2. The ultimate responsibility for the product or service provided by the sub-contractor always remains with the AMO. A written agreement shall exist between the AMO and the sub-contractor clearly defining the safety related services and quality to be provided. The sub-contractor's safety related activities relevant to the agreement shall be included in the AMO's quality assurance programme.

4.1.3. The AMO shall ensure that the sub-contractor has the necessary authorisation/approval when required and commands the resources and competence to undertake the task.

5.0. QUALITY SYSTEM TRAINING.

General.

5.1.1. An AMO shall establish effective, well planned and resourced quality related briefing for all personnel.

5.1.2. Those responsible for managing the quality system shall receive training covering :

(*a*) An introduction to the concept of the quality system ;

(*b*) Quality management ;

(*c*) The concept of quality assurance ;

(*d*) Quality manuals ;

(*e*) Audit techniques ;

(*f*) Reporting and recording ; and

(*g*) The way in which the quality system will function in the company.

5.1.3. Time shall be provided to train every individual involved in quality management and for briefing the remainder of the employees. The allocation of time and resources shall be governed by the size and complexity of the AMO.

Sources of Training.

5.2.1. Quality management courses are available from the various National or International Standards Institutions, and an AMO shall consider whether to offer such courses to those likely to be involved in the management of quality systems. AMO's with sufficient appropriately qualified staff shall consider whether to carry out in-house training.

6.0. ORGANISATIONS WITH 20 OR LESS FULL-TIME EMPLOYEES.

Introduction.

6.1.1. The requirement to establish and document a quality system, and to employ a quality manager applies to all AMO's. References to large and small operators elsewhere in these Regulations are governed by aircraft capacity (i.e. more or less than 20 seats) and by mass (*i.e.* greater or less than 10 tonnes maximum take-off mass). Such terminology is not relevant when considering the scale of an operation and the quality system required. In the context of quality systems therefore, operators shall be categorised according to the number of full time staff employees.

Scale of Operation.

6.2.1. An AMO employing 12 or less full-time technical staff is considered to be "small" as far as quality systems are concerned. Full-time in this context means employed for not less than 35 hours per week excluding vacation periods.

6.2.2. A complex quality system could be inappropriate for a small AMO because the clerical effort required to develop manuals and quality procedures for a complex system may stretch its resources. Such an AMO may tailor its quality system to suit the size and complexity of its operation and allocate its resources more efficiently, subject to the acceptance by the Authority.

Quality System for Small AMO'S.

6.3.1. For small and very small AMO's it may be appropriate to develop a quality assurance programme that employs a checklist. The checklist shall have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the quality assurance shall be undertaken.

6.3.2. The "small" AMO may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and or qualified organisations to perform the quality audits on behalf of the quality manager.

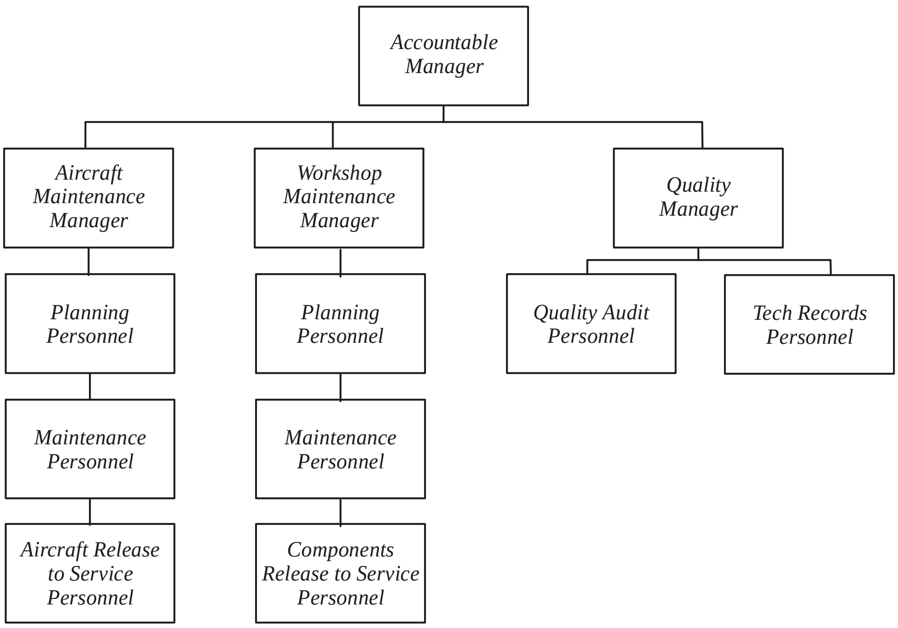
6.3.3. If the independent quality audit function is being conducted by external auditors, the audit schedule shall be shown in the relevant documentation.

6.3.4. Whatever arrangements are made, the operator retains the ultimate responsibility for the quality system and especially the completion and follow-up of corrective actions.

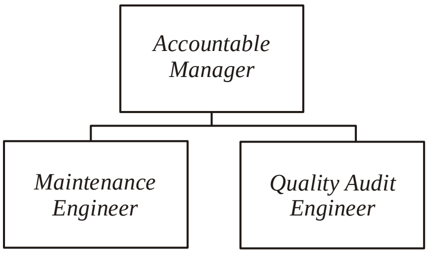
6.4. QUALITY SYSTEM — ORGANISATION EXAMPLES

The following diagrams illustrate two typical examples of AMO Quality organisations.

6.4.1. A typical large AMO.



6.4.2. A typical small AMO.



Housing and Facility Requirements.

IS 6.3.1.2.—(*a*) For ongoing maintenance of aircraft, aircraft hangars shall be available and large enough to accommodate aircraft during maintenance activities.

(*b*) Where the hangar is not owned by the AMO, the AMO shall :

(1) Establish proof of authorisation to use hangar ;

(2) Demonstrate sufficiency of hangar space to carry out planned base maintenance by preparing a projected aircraft hangar visit plan relative to the maintenance program ;

(3) Update the aircraft hangar visit plan on a regular basis ;

(4) Ensure, for aircraft component maintenance, aircraft component workshops are large enough to accommodate the components on planned maintenance ;

(5) Ensure aircraft hangar and aircraft component workshop structures prevent the ingress of rain, hail, ice, snow, wind and dust, etc. ;

(6) Ensure workshop floors are sealed to minimise dust generation ; and

(7) Demonstrate access to hangar accommodation for usage during inclement weather for minor scheduled work and/or lengthy defect rectification.

(*c*) Aircraft maintenance staff shall be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner.

(*d*) Hangars used to house aircraft together with office accommodation shall be such as to insure a clean, effective and conformable working environment :

(1) Temperatures shall be maintained at a comfortable level.

(2) Dust and any other airborne contamination shall be kept to a minimum and not permitted to reach a level in the work task area where visible aircraft/ component surface contamination is evident.

(3) Lighting shall be such as to insure each inspection and maintenance task can be carried out.

(4) Noise levels shall not be permitted to rise to the point of distracting personnel from carrying out inspection tasks. Where it is impractical to control the noise source, such personnel shall be provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks.

(*e*) Where a particular maintenance task requires the application of specific environmental conditions different to the foregoing, then such conditions shall be observed. (Specific conditions are identified in the approved maintenance instructions).

(*f*) Where the working environment for line maintenance deteriorates to an unacceptable level with respect to temperature, moisture, hail, ice, snow, wind, light, dust/other airborne contamination, the particular maintenance or inspection tasks shall be suspended until satisfactory conditions are re-established.

(*g*) For both base and line maintenance where dust or other airborne contamination results in visible surface contamination, all susceptible systems shall be sealed until acceptable conditions are reestablished.

(*h*) Storage facilities for serviceable aircraft components shall be clean, well ventilated and maintained at an even dry temperature to minimise the effects of condensation.

(*i*) Manufacturer and standards recommendations shall be followed for specific aircraft components.

(*j*) Storage racks shall provide sufficient support for large aircraft components such that the component is not distorted.

(*k*) All aircraft components, wherever practicable, shall remain packaged in protective material to minimise damage and corrosion during storage.

Equipment, Tools, and Materials.

IS 6.3.1.3.—(*a*) The calibration of all applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness shall be traceable to a national standard recognized by the Authority.

(*b*) Except as provided in paragraph (*a*), in the case of foreign manufactured tools, equipment, and test equipment, the standard provided by the country of manufacture may be used if approved by the Authority.

(*c*) Where the manufacturer specifies a particular tool, equipment, or test equipment then that tool, equipment, or test equipment shall be used unless the manufacturer has identified the use of an equivalent.

(*d*) Except as provided in paragraph (c), tools, equipment, or test equipment other than that recommended by the manufacturer will be acceptable based on at least the following :

(1) The AMO shall have a procedure in the Maintenance Procedures Manual if it intends to use equivalent tools, equipment, or test equipment other than that recommended by the manufacturer.

(2) The AMO shall have a program to include :

(*i*) A description of the procedures used to establish the competence of personnel that make the determination of equivalency to tools, equipment, or test equipment.

(*ii*) Conducting and documenting the comparison made between the specification of the tool, equipment or test equipment recommended by the manufacturer and the equivalent tool, equipment, or test equipment proposed.

(*iii*) Ensuring that the limitations, parameters, and reliability of the proposed tool, equipment, or test equipment are equivalent to the manufacturer's recommended tools, equipment, or test equipment.

(*iv*) Ensuring that the equivalent tool, equipment, or test equipment is capable of performing the appropriate maintenance function, all normal tests, or calibrations, and checking all parameters of the aircraft or aeronautical product undergoing maintenance or calibration.

(3) The AMO shall have full control of the equivalent tool, equipment, or test equipment (i.e. through ownership, lease, etc.)

(*e*) An AMO approved for base maintenance shall have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft may be properly inspected.

(*f*) The AMO shall have a procedure to inspect/service and, where appropriate, calibrate tools, equipment, and test equipment on a regular basis and indicate to users that an item is within any inspection or service or calibration time limit.

(*g*) The AMO shall have a procedure if it uses a standard (primary, secondary or transfer standards) for performing calibration, to ensure that standard cannot be used to perform maintenance.

(*h*) A clear system of labelling all tooling, equipment and test equipment shall be used to give information on when the next inspection or service or calibration is due, and give status information if the item is unserviceable for any other reason where it may not be obvious.

(*i*) A clear system of labelling all tooling, equipment, and test equipment shall be used to give information on when such tooling, equipment, and test equipment is not used for product acceptance and/or for making a finding of airworthiness.

(*j*) A register shall be maintained for all calibrated tools, equipment and test equipment together with a record of calibrations and standards used.

(*k*) Inspection, service, or calibration on a regular basis shall be in accordance with the equipment manufacturers' instructions except where the AMO can show by results that a different time period is appropriate in a particular case and is acceptable to the Authority.

Personnel Requirements.

IS 6.4.1.1.—(*a*) The AMO functions shall be subdivided under individual managers or combined in any number of ways, dependent upon the size of the AMO.

(*b*) The AMO shall have, dependent upon the extent of approval, the following managers, all of whom shall report to the Accountable Manager :

(1) A base maintenance manager ;

(2) A line maintenance manager ;

(3) A workshop manager ; and

(4) A quality manager.

(*c*) The Accountable Manager shall be responsible for ensuring that all necessary resources are available to accomplish maintenance required to support the AMO's approval.

(1) The minimum entry qualifications for a Base Maintenance Manager are :

(*i*) An Aircraft Maintenance Engineer (AME) licence with airframe and powerplant ratings ;

(*ii*) 3 years in maintaining the same category and class of aircraft maintained by the AMO, including 1 year of returning aircraft to service from base maintenance ; and

(*iii*) 1 year supervisory experience maintaining the same category and class of aircraft maintained by the AMO.

(2) Base Maintenance Manager shall be responsible for :

(*i*) Ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification carried out during base maintenance, is carried out to specified design and quality standards ; and

(*ii*) Any corrective action resulting from quality compliance monitoring.

(*d*)—(1) The minimum entry qualifications for a Line Maintenance Manager are :

(*i*) An Aircraft Maintenance Engineer (AME) licence with airframe and powerplant ratings ;

(*ii*) 3 years in maintaining the same category and class of aircraft maintained by the AMO, including 1 year of returning aircraft to service from line maintenance ; and

(*iii*) 1 year supervisory experience maintaining the same category and class of aircraft maintained by the AMO.

(2) The Line Maintenance Manager shall be responsible for :

(*i*) Ensuring that all maintenance required to be carried out on the line, including line defect rectification, is performed to the required standards ; and

(*ii*) Any corrective action resulting from quality compliance monitoring.

(*e*)—(1) The minimum entry qualifications for a Workshop Manager are :

(*i*) An Aircraft Maintenance Engineer (AME) licence with airframe and powerplant ratings, avionics ratings, or Aircraft Repair Specialist with 3 years experience working in the workshop ; and

(*ii*) 1 year supervisory workshop experience.

(2) The Workshop Manager shall be responsible for :

(*i*) Ensuring that all work on aircraft components is performed to required standards ; and

(*ii*) Any corrective action resulting from quality compliance monitoring.

(*f*)—(1) The minimum requirements for a Quality Manager are :

(*i*) He must either be a holder of Aircraft Maintenance Engineers' Licence in the following ratings: Airframes and Powerplant or Avionics, (ratings on aircraft type not essential) with five (5) years working experience in line/base maintenance, maintenance planning or technical services ; or

(*ii*) Be a person qualified by holding an academic degree in an aeronautical, mechanical or electrical /electronic engineering discipline from a recognized university or other higher educational institution ; and

(*iii*) A person with a minimum of five (5) years working experience in the quality system and/or continuing airworthiness - in the aviation industry ;

(*iv*) A person with proven satisfactory audit experience acceptable to the Authority preferably in aviation ;

(*v*) In-depth knowledge of Nigeria Civil Aviation Regulations and Standard Maintenance Practices ;

(*vi*) Broad knowledge of the aviation and the organizations activities and procedures ;

(*vii*) Good understanding of quality management principles ;

(*viii*) Oral and written communication skills

(2) The Quality Manager shall be responsible for :

(*i*) Monitoring the AMO's compliance with Part 6 of these Regulations ; and

(*ii*) Requesting remedial action as necessary by the base maintenance manager/line maintenance manager/workshop manager or the accountable manager, as appropriate.

(*g*) The AMO may adopt any title for managerial positions, but shall identify to the Authority the titles and persons chosen to carry out these functions.

(*h*) Where an AMO chooses to appoint managers for all or any combination of the identified functions because of the size of the undertaking, these managers shall report ultimately through either the Base Maintenance Manager or Line Maintenance Manager or Workshop Manager or Quality Manager, as appropriate, to the accountable manager.

(*i*) The managers specified in this sub-section shall be identified and their credentials submitted to the Authority. To be accepted, such managers shall have relevant knowledge and satisfactory experience related to aircraft/aircraft component maintenance as appropriate in accordance with these regulations.

(*j*) The AMO shall have a production man-hours plan showing that it has sufficient man-hours for the intended work.

(*k*) If an AMO is approved for base maintenance, the plan shall relate to the aircraft hangar visit plan.

(*l*) Man-hour plans shall regularly be updated.

(*m*) Quality monitoring compliance function man-hours shall be sufficient to meet the requirement of NCAA.

(*n*) Planners, mechanics, supervisors and certifying staff shall be assessed for competence by "on the job" evaluation or by examination relevant to their particular role within the AMO before unsupervised work is permitted.

(*o*) To assist in the assessment of competence, job descriptions are recommended for each position. The assessment shall establish that :

(1) Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the aircraft maintenance program.

(2) Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance instructions and shall notify supervisors of mistakes requiring rectification to reestablish required maintenance standards.

(3) Supervisors are able to ensure that all required maintenance tasks are carried out and where not done or where it is evident that a particular maintenance task cannot be carried out to the maintenance instructions, then such problems shall be reported to and agreed by the quality organisation.

(4) Certifying staff are able to determine when the aircraft or aircraft component is and is not ready for release to service.

(*p*) In the case of planners, supervisors, and certifying staff, knowledge of AMO procedures relevant to their particular role shall be demonstrated.

(*q*) Training of certifying staff shall be performed by the AMO or by an institute selected by the AMO. In either case, the AMO shall establish the curriculum and standards for training, as well as prequalification standards for the personnel intended for training. Pre-qualification standards are intended to insure that the trainee has a reasonable chance of successfully completing any course.

(*r*) Examinations shall be set at the end of each training course.

(*s*) Initial training shall cover :

(1) Basic engineering theory relevant to the airframe structure and systems fitted to the class of aircraft the AMO intends to maintain ;

(2) Specific information on the actual aircraft type on which the person is intended to become a certifying person including the impact of repairs and system/structural defects ; and

(3) Company procedures relevant to the certifying staff's tasks.

(*t*) Continuation training shall cover changes in AMO procedures and changes in the standard of aircraft and/or aeronautical products maintained.

(*u*) The training program shall include details of the number of personnel who shall receive initial training to qualify as certifying staff over specified time periods.

(*v*) The training program established for maintenance personnel and certifying staff by the AMO shall include training in knowledge and skills related to human performance including co-ordination with other maintenance personnel and flight crew.

Indoctrination, Initial, Recurrent, Specialised and Remedial Training.

IS 6.4.1.2.—(*a*) Each AMO shall provide indoctrination training for employees that includes at least 40 hours of instruction in at least the following subjects :

(1) *Nigeria CARs.*—Particularly those associated with AMO maintenance functions and authority as reflected on the certificate and operations specifications ;

(2) Company manuals, policies, procedures and practices, including quality control processes, particularly those associated with ensuring compliance with maintenance (including inspection), preventive maintenance, and alteration procedures established to show compliance with Part 6 ;

(3) Dangerous goods requirements of 6.4.1.3, including other local, Nigerian, and national laws requiring training for different categories of employees ;

(4) *Maintenance human factors.*—the elements shall focus on aviation maintenance, and safety related issues ;

(5) *Computer Systems and Software*.—As applicable to the repair station's maintenance (including inspection, preventive maintenance and alteration systems and procedures ; and

(6) *Facility Security*.—which shall include company security objectives, specific security procedures, employee responsibilities, actions to take in the event of a security breach, and the organisational security structure.

(*b*) I*nitial Training*.—Each AMO shall provide initial training for employees that includes at least 80 hours of instruction in at least the following subjects consistent with the specific employee position and assigned job activities :

(1) General review ;

(2) Specific job or task training ;

(3) Shop safety ;

(4) Records and record keeping ;

(5) Materials and parts ;

(6) Test equipment, including ground support equipment ;

(7) Tools ;

(8) Maintenance human factors ;

(9) Fuel Tank Safety (min 8hrs) ; and

(10) Any other items as required by the Authority.

(*c*) *Recurrent Training.*—Each AMO shall provide recurrent training for employees that include at least 8 hours of instruction in the subjects below :

(1) Refresher of subjects covered in initial training ;

(2) New items introduced in the AMO since completion of initial training ;

(3) Any other items required by the Authority.

(*d*) *Specialised Training.*—Each AMO shall provide specialised training, including initial and recurrent, for employees whose duties require a specific skill. Examples of specialised skills include: flame and/or plasma spray operations, special inspection or test techniques, special machining operations, complex welding operations, aircraft inspection techniques or complex assembly operations.

(*e*) *Remedial Training*.—Each AMO shall provide remedial training to rectify an employee's demonstrated lack of knowledge or skill by providing information as soon as possible. In some instances, remedial training may consist of an appropriately knowledgeable person reviewing procedures with an employee through on-the-job training. Remedial training shall be designed to fix an immediate knowledge or skill deficiency and may focus on one individual. Successful remedial training shall show an individual what occurred, why it occurred, and in a positive manner, how to prevent it from occurring again.

(*f*) Each AMO, in developing training for employees, shall take into account the various training, experience, and skill levels of its employees as follows :

(1) Employees that hold an AME licence ;

(2) Employees with experience performing similar tasks at another AMO ;

(3) Employees with applicable military aviation maintenance experience ; and

(4) Employees with no prior skills, experience, or knowledge.

(*g*) Each AMO shall have procedures to determine the frequency of recurrent training and the need for specialised and remedial training.

(*h*) Each AMO shall assess the competency of its employees for performing his or her assigned duties after completion of initial, recurrent, specialised and remedial training. This assessment of competency shall be appropriately documented in the employee's training records and shall be done by any of the following methods, depending upon the size of the AMO, its capabilities and experience of its employees :

(1) Written test.

(2) Completion of a training course.

(3) Skill test.

(4) Group exercise.

(5) On the job assessment.

(6) Oral examination in the working environment.

Dangerous Goods Training Programme.

IS 6.4.1.3.—(*a*) Dangerous goods training, at a minimum, shall include at least 8 hours instruction in at least the following :

(1) *General awareness/familiarisation Training*.—designed to provide familiarity with the requirements of this Part and the dangerous goods regulations in Part 9 of these Regulations and to enable the employee to recognise and identify dangerous goods.

(2) *Function-specific training.*— concerning the specific requirements of this Part and the dangerous goods regulations in Part 9 of these Regulations, or exemptions or special permits issued, relating to the specific functions the employee performs.

(3) *Safety Training concerning*—

(*i*) Emergency response.

(*ii*) Measures to protect the employee from the hazards associated with the dangerous goods to which they may be exposed in the work place, including specific measures the employer has implemented to protect employees from exposure.

(*iii*) Methods and procedures for avoiding accidents, such as the proper procedures for handling packages containing dangerous goods.

(4) *Security ; awareness training.*—addressing the security risks associated with dangerous goods transportation and methods designed to enhance transportation security. This training must also include a component covering how to recognise and respond to possible security threats.

(5) *In-depth Security Training.*—must include company security objectives, specific security procedures, employee responsibilities, actions to take in the event of a security breach, and the organisational security structure.

(6) Any other training required by the Authority.

Records of Management, Supervisory, Inspection and Certifying Staff.

IS 6.4.1.5.—(*a*) The following minimum information shall be kept on record in respect of each management, supervisory, inspection and certifying person :

(1) Name ;

(2) Date of birth ;

(3) Basic training ;

(4) Type training ;

(5) Continuation training ;

(6) Experience ;

(7) Qualifications relevant to the approval ;

(8) Scope of the authorisation ;

(9) Date of first issue of the authorisation ;

(10) Expiration date of the authorisation (if appropriate) ; and

(11) Identification number of the authorisation.

(*b*) Records of these individuals shall be controlled.

(*c*) The number of persons authorised to access the system shall be limited to minimise the possibility of records being altered in an unauthorised manner and to limit confidential records from become accessible to unauthorised persons.

(*d*) A certifying person shall be given reasonable access on request to his or her records.

(*e*) The Authority is authorised to and may investigate the records system for initial and continued approval or when the Authority has cause to doubt the competence of a particular certifying person.

(*f*) The AMO shall keep the record of these individuals for at least two years after that person has ceased employment with the AMO or after withdrawal of his or her authorisation. Upon request, the certifying staff shall be furnished with a copy of their record on leaving the AMO.

AMO Procedures Manual.

IS 6.5.1.1.—(*a*) AMO personnel shall shall be familiar with those parts of the manuals that are relevant to the maintenance work they perform.

(*b*) The AMO shall specify in the Maintenance Procedures Manual who shall amend the manual, particularly in the case where the manual consists of several parts.

(*c*) The Quality Manager shall be responsible for—

(1) Monitoring the amendment of the Maintenance Procedures Manual, including associated procedures manuals.

(2) Submitting proposed amendments to the Authority for approval, unless the Authority has agreed, via a procedure stated in the amendment section

of the Maintenance Procedures Manual, that some defined class of amendments may be incorporated without approval by the Authority.

(*d*) The AMO procedures manual shall contain the following content :

1.0. GENERAL :

1.1. a general description of the scope of work authorised under the organisation's terms of approval ;

1.2. a description of the organisation's procedures and quality or inspection system ;

1.3. a general description of the organisation's facilities ;

1.4. the names, tasks, duties and responsibilities of the person or persons are required to ensure the maintenance organisation is in compliance with the Nig. CARs. Part 6 ;

1.5. a description of the procedures used to establish the competence of maintenance personnel as required by 6.4.1.2 and 6.4.1.3 ;

1.6. a description of the method used for the completion and retention of the maintenance records required by 6.5.1.8. The records shall show that all requirements for signing of the maintenance release have been met. The records shall be kept for a minimum period of one year after signing of the maintenance release ;

1.7. a description of the procedure for preparing the maintenance release and the circumstances under which the release is to be signed ;

1.8. the personnel authorised to sign the maintenance release and the scope of their authorisation. The person signing the maintenance release shall be qualified in accordance with MCAR Part 2 ;

1.9. a description, when applicable, of the additional procedures for complying with an operator's maintenance procedures and requirements ;

1.10. a description of the procedures in respect of aeroplanes of over 5 700 kg maximum certificated take-off mass and helicopters of over 3 175 kg maximum certificated take-off mass, whereby information on faults, malfunctions, defects and other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aircraft is transmitted to the organisation responsible for the type design of that aircraft and to the operator's airworthiness authority ; and

NOTE : *Guidance on "interpretation of the organisation responsible for the type design" is contained in ICAO Doc* 9760, *Part III, Chapter* 4, *Section* 4.2.

1.11. a description of the procedure for receiving, amending and distributing within the AMO all necessary airworthiness data from the Type Certificate holder or type design organisation ;

1.12. if the manual is also used to comply with the requirements of the maintenance programme for an aircraft, the maintenance programme should be included.

2.0. Management

2.1. a statement signed by the CEO confirming that the manual defines the organisation's procedures and associated personnel responsibilities and will be complied with at all times ;

2.2. an organisation chart showing the associated chains of responsibility of the persons nominated responsible for the AMO safety management system.

2.3. notification procedures to the airworthiness authority regarding changes to the organisation's activities/approval/location/personnel ; and

2.4. amendment procedures for the manual.

3.0. Maintenance Procedures

3.1. supplier evaluation procedure ;

3.2. acceptance/inspection of aircraft components and material from outside contractors ;

3.3. storage, labelling/tagging and release of aircraft components and material to aircraft maintenance ;

3.4. acceptance of tools and equipment ;

3.5. calibration of tools and equipment ;

3.6. use of tools and equipment by staff (including alternate tools) ;

3.7. cleanliness standards of maintenance facilities ;

3.8. maintenance instructions and relationship to aircraft/aircraft component manufacturers' service information including updating and availability to staff ;

3.9. repair procedure ;

3.10. procedures for compliance with an operator's aircraft maintenance programme ;

3.11. airworthiness directives procedure ;

3.12. optional modification procedure ;

3.13. maintenance documentation in use and completion of same ;

3.14. technical record control ;

3.15. procedures for handling of defects arising during maintenance ;

3.16. issue of the maintenance release required by 6.5.1.7 ;

3.17. records for the operator (if the organisation is not an operator itself) ;

3.18. reporting of defects and other occurrences as required by the Authority ;

3.19. return of defective aircraft components to store ;

3.20. control of defective components sent to outside contractors for overhaul, etc. ;

3.21. control of computer maintenance record systems ;

3.22. reference to specific maintenance procedures such as engine running procedures, aircraft pressure run procedures, aircraft towing procedures ; and aircraft taxiing procedures ;

3.23. sub-contract procedures ;

3.24. human factors ; and

3.25. manpower resources.

3.0. LINE MAINTENANCE PROCEDURES (WHEN APPLICABLE)

3.1. line maintenance control of aircraft components tools, equipment, etc. ;

3.2. line maintenance procedures related to servicing/fuelling/de-icing, etc. ;

3.3. line maintenance control of defects and repetitive defects ;

3.4. line procedure for pooled parts and loan parts ; and

3.5. line procedure for return of defective parts removed from aircraft.

4.0. QUALITY SYSTEM PROCEDURES

4.1. quality audit of organisation procedures ;

4.2. quality audit of aircraft ;

4.3. quality audit findings remedial action procedure ;

4.4. the qualification and training procedures for personnel issuing a maintenance release (“certifying staff”) ;

4.5. records of certifying staff ;

4.6. the qualification and training procedures for quality audit personnel ;

4.7. the qualification and training procedures for mechanics ;

4.8. exemption process control ;

4.9. concession control for deviation from organisation’s procedures ;

4.10. qualification procedure for specialised activities such as non-destructive testing (NDT), welding, etc. ;

4.11. control of manufacturer’s working teams based at the premises of the organisation, engaged in tasks which interface with activities included in the approval ; and

4.12. quality audit of sub-contractors (or acceptance of accreditation by third parties, e.g. use of NDT organisations approved by a State regulatory body other than the airworthiness authority).

5.0. EXAMPLES OF STANDARD DOCUMENTS.

Examples of standard documents used by the AMO which are associated with activities undertaken under the terms and conditions of the approval, such as : 1) technical record control ; or 2) rectification of defects.

6.0. QUALITY ASSURANCE AUDIT PROCEDURES

The list, which follows, is not exhaustive, but includes the principal audit checks which need to be considered.

6.1. Checks on aircraft, while undergoing scheduled maintenance, for :

6.1.1. compliance with maintenance programme and mandatory continuing airworthiness requirements and ensuring that only work instructions reflecting the latest amendment standards are used ;

6.1.2. completion of work instructions including the transfer of defects to additional worksheets, their control, and final collation. Action taken in respect of items carried forward, not completed during the particular inspection or maintenance task ;

6.1.3. compliance with manufacturers' and the organisation's standard specifications and procedures ;

6.1.4. standards of inspection and workmanship ;

6.1.5. condition of corrosion prevention and control treatments and other protective processes ;

6.1.6. aircraft maintenance which is not limited to the normal working day ; procedures adopted during shift changeover of personnel to ensure continuity of inspection and responses ; and

6.1.7. precautions taken to ensure that, on completion of any work or maintenance, all aircraft are checked for loose tools and miscellaneous small items such as split pins, wire, rivets, nuts, bolts and other debris, and for general cleanliness and housekeeping.

6.2. Checks on airworthiness data for :

6.2.1. adequacy of aircraft manuals and other technical information appropriate to each aircraft type, including engines, propellers and other equipment, and the continuing receipt of revisions and amendments, availability of continuing airworthiness data, e.g., Airworthiness Directives, life limits, etc. ;

6.2.2. assessment of manufacturer's service information, determining its application to aircraft types maintained and the recording of compliance or embodiment ;

6.2.3. maintenance of a register of manuals and technical literature held within the organisation, their locations and current amendment status ; and

6.2.4. assurance that all the organisation's manuals and documents, both technical and procedural, are kept up to date.

6.3. Checks on stores and storage procedures for :

6.3.1. the adequacy of stores and storage conditions for rotatable components, small parts, perishable items, flammable fluids, engines and bulky assemblies in accordance with the specifications adopted by the organisation ;

6.3.2. the procedure for examining incoming components, materials and items for conformity with order, release documentation and procurement from sources approved by the organisation ;

6.3.3. the "batch recording" of goods received and identification of raw materials, the acceptance of part life items into stores, requisition procedures for issue of items from stores ;

6.3.4. labelling procedures, including the use of serviceable/unserviceable/ repairable labels and their certification and final disposal after installation, and labelling procedures for components which are serviceable but "part life" only ;

6.3.5. the internal release procedure to be used when components are to be forwarded to other locations within the AMO ;

6.3.6. the procedure to be adopted for the release of goods or overhauled items to other organisations (this procedure should also cover items being sent away for rectification or calibration) ;

6.3.7. the procedure for the requisitioning of tools together with the system for ensuring that the location of tools, and their calibration and maintenance status, is known at all times ; and

6.3.8. control of shelf life and storage conditions in the stores; control of the free-issue dispensing of standard parts, identification and segregation.

6.4. Checks on maintenance facilities for :

6.4.1. cleanliness, state of repair and correct functioning of hangars, hangar facilities and special equipment and the maintenance of mobile equipment ;

6.4.2. adequacy and functioning of special services and techniques including welding, nondestructive inspection (NDI), weighing, painting ;

6.4.3. viewer/printer equipment provided for use with microfiche, microfilm and compact disk, ensuring that regular maintenance takes place and an acceptable standard of screen reproduction and printed copy is achieved ;

6.4.4. the adequacy of special tools and equipment appropriate to each type of aircraft, including engines, propellers and other equipment ;

6.4.5. the calibration and maintenance of tools and measuring equipment; and for environmental controls.

6.5. Checks on the AMO's general airworthiness control procedures for :

6.5.1. monitoring the practices of the organisation in respect of scheduling or pre-planning maintenance tasks to be carried out in the open air and adequacy of the facilities provided ;

6.5.2. operation of the system for service difficulty reporting required by the Authority ;

6.5.3. authorisation of personnel to issue maintenance releases in respect of inspections and maintenance tasks; the effectiveness and adequacy of training, including continuation training and the recording of personnel experience, training and qualifications for grant of authorisation ;

6.5.4. the effectiveness of technical instructions issued to maintenance personnel ;

6.5.5. the adequacy of personnel in terms of qualifications, numbers and ability in all areas required to support the activities included in the approval granted by the airworthiness authority ;

6.5.6. the efficacy and completeness of the quality audit programme ;

6.5.7. maintaining logbooks and other required records and ensuring that these documents are assessed in accordance with the requirements of the Authority ;

6.5.8. ensuring that repairs are only carried out in accordance with approved repair schemes and practices ;

6.5.9. control of sub-contractors ;

6.5.10. control of activities sub-contracted to it, such as management of the operator's maintenance programme ;

6.5.11. monitoring “Exemption process control” and monitoring “Concession control for deviation from the AMO’s procedures” ; and

6.5.12. follow-up internal reporting/occurrences

IS 6.5.1.7.—Certificate of Release to Service of an Aircraft, Part, Component or Assembly.

<table>
<tr><td colspan="2">1. Nigeria</td><td colspan="3">2. NCAA Form One
Authorised Release Certificate/
Airworthiness Approval Tag Civil
Aviation Administration</td><td colspan="2">3. System Tracking
Ref. No.</td></tr>
<tr><td colspan="5">4. Organisation Name and Address :</td><td colspan="2">5. Work Order,
Contract or
Invoice Number</td></tr>
<tr><td>6. Item</td><td>7. Description</td><td>8. Part Number</td><td>9. Eligibility (Installer must check eligibility with applicable technical data)</td><td>10. Quantity</td><td>11. Serial/Batch Number</td><td>12. Status/Work</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="7">13. Remarks</td></tr>
<tr><td colspan="4">14. Certifies that the items identified above were manufactured in conformity to :
☐ approved design data and are in condition for safe operation
☐ non-approved design data specified in block 13</td><td colspan="3">19. Part 5.7.1.2 Release to Service other regulation specified in Block 13
Certifies that unless otherwise specified in block 13 (or attached), the work identified in Block 12 and described in block 13, above was accomplished in accordance with CAA airworthiness regulations and in respect to that work, the item(s) is (are) approved for return to service.</td></tr>
<tr><td colspan="2">15. Authorised Signature</td><td colspan="2">16. Approval/ Authorisation Number</td><td colspan="2">20. Authorised Signature</td><td>21. Approval/ Certificate Number</td></tr>
<tr><td colspan="2">17. Name (Typed or Printed) :</td><td colspan="2">18. Date (dd/mm/ yy) :</td><td colspan="2">22. Name (Typed or Printed) :</td><td>23. Date (dd/mm/ yy) :</td></tr>
</table>

LINE-BY-LINE INSTRUCTIONS FOR COMPLETION OF NCAA FORM ONE :

(*a*) *Block* 1. Nigeria (Pre-printed).

(*b*) *Block* 2. NCAA, Airworthiness Approval Tag, and Civil Aviation Administration (Pre-printed).

(*c*) *Block* 3. System Tracking Reference Number.

(1) Fill in the unique number established by the NCAA-approved numbering system.

(2) If the form is computer-generated, it may be produced as programmed by the computer.

NOTE : *Shippers must establish a numbering system for traceability in order to fill out block* 3 *of the form. This system must also provide a means of cross-referencing the number*(*s*) *and product*(*s*) *being shipped*.

(*d*) *Block* 4. Organisation.

(1) Fill in the full name and address of the AMO or individual shipping the product(s)/part(s) as applicable :

(*i*) Company name and address.

(*ii*) Production Approval Holder (PAH) approval or certificate numbers as issued by the Authority of the State of Manufacturer, when applicable (e.g., production certificate number, approved maintenance organisation certificate numbers, air operator certificate number.

NOTE : *Production certificates are issued to manufacturing companies by an Authority. The Nigeria CARs presume that Nigeria is not yet a State of Manufacture or Design. However, aircraft registered in Nigeria will likely be repaired, altered or rebuilt using parts and components exported from the State of Manufacturer. Companies performing the repair, alteration, rebuild and export will be certificated by the State of Manufacturer as a production approval holder. The PAH is required by the State of Manufacturer to use the airworthiness approval tag and certify their work in blocks* 14 - 8 *as described in this Part. Consequently States which will not be filling out block* 14-18 *will need to be familiar with all the uses of this form in order to properly accept parts and components. Production certificates are described in* 14 *CFR* : 21, *Subpart G*.

(2) When a supplier has direct ship authorisation from a PAH, the following information shall be entered :

(*i*) PAH name and address.

(*ii*) PAH approval or certificate number.

(*iii*) C/o Supplier name and address.

NOTE : *If an individual product/part is produced as a spare by a supplier, the supplier must have either direct ship authority or hold a production* *approval* (*TSO authorisation*) *for all products/parts shipped. If the supplier holds its own production approval, and the products/parts were manufactured and are being shipped under that approval, the information required in paragraph* (1) *above shall be listed.*

(*e*) *Block* 5. Work Order, Contract, or Invoice Number.

(1) Fill in the contract, work order, or invoice number related to the shipment list, or maintenance release, and state the number of pages attached to the form, including dates, if applicable. If the shipment list contains the information required in Blocks 6 through 12, the respective blocks may be left blank if an original, or true copy, of the list is attached to the form. In this case, the following statement shall be entered in Block 13 : "This is the certification statement for the products/parts listed on the attached document dated _________, containing pages ______ through ______."

(2) In addition, the shipment list must cross-reference the number located in Block 3. The shipment list may contain more than one item; but it is the responsibility of the shipper to determine if the CAA of the importing jurisdiction will accept bulk shipments under a single NCAA Form One. If the CAA does not permit bulk shipments under a single form, Blocks 6 through 12 of each form must be filled in for each product shipped.

(*f*) *Block 6*. Item. When NCAA Form One is issued a single item number or multiple item numbers may be used for the same part number. Multiple items shall be numbered in sequence. If a separate listing is used, enter "List Attached".

NOTE : *The blank form can be computer-generated. However, the format cannot be changed, nor can any words be added or deleted. Pre-printing of some information is permissible, i.e.; the information in blocks* 1, 2, 3, 4, *and* 19. *The size of blocks may be varied slightly, but the form must remain readily recognisable. The form may also be reduced in overall size to facilitate placement of the wording on the back of the form onto the face of the document.*

(*g*) *Block* 7. Description. Enter the name or description of the product/ part as shown on the design data. For products/parts that do not have design data available, the name as referenced in a part catalog, overhaul manual, etc., can be used.

(*h*) *Block* 8. Part Number. Enter each part number of the product.

(*i*) *Block* 9. Eligibility. State the aircraft, aircraft engine, or propeller make and model on which the parts manufacture approval is eligible for installation. If a part is eligible for installation on more than one model enter the words "to be verified by installer or TBV by installer". Where parts are TSO articles, state "TSO Article N/A" since eligibility for installation for TSO articles is determined at the time of installation.

NOTE : *For TSO articles NCAA Form One does not constitute authority to install a product on a particular aircraft, aircraft engine, or propeller. The user or installer is responsible for confirming that the product is eligible for installation by reference to overhaul manuals, service bulletins, etc., as applicable. While the information in Block* 9 *is optional, it shall be filled out whenever possible.*

(*j*) *Block* 10. Quantity. State the quantity of each product/part shipped.

(*k*) *Block* 11. Serial/Batch Number. State the serial number or equivalent (identified on the part) on the form for each product/part shipped. If a serial number or equivalent is not required on the part, enter "N/A".

(*l*) *Block* 12. Status/work. Enter "Newly Overhauled" for those products that have not been operated or placed in service since overhaul. Enter "PROTOTYPE" for products/parts submitted to support type certification programs. Other permissible/appropriate terms to describe the status of the product/part include : "INSPECTED", "REPAIRED", "REBUILT", or "ALTERED".

(*m*) *Block* 13. Remarks. Enter any information or references to support documentation necessary for the user or installer to make a final determination of airworthiness of the products/parts listed in Block 7. Each statement must specify which item identified in Block 6 is related. Examples of information to be supplied are as follows :

(1) Any restrictions (e.g., prototype only).

(2) Alternative approved part number.

(3) Compliance or non-compliance with airworthiness directives or service bulletins.

(4) Information on life-limited parts.

(5) Manufacturing, cure, or shelf-life data.

(6) Drawing and revision level.

(7) When used for conformity the word "CONFORMITY" must be entered in capital letters. In addition, an explanation of the products/parts use, e.g., pending approved data, type certificate pending, for test only, etc., shall be provided. Information concerning a conformity inspection such as design data, revision level, date, project number.

(8) When used for spare parts identify whether the parts are from the original manufacturer or another approved source and are made to the TSO. In addition, if the Airworthiness Approval Tag [AAT] is for spare parts or sub components of a NCAA approved replacement part, the TSO authorisation shall be listed in Block 13.

(9) When used for return to service this block shall contain the data required by 5.7.1.2.

(*n*) *Blocks* 14, 15, 16, 17 and 18 : Must not be used for maintenance tasks by Part 6 approved maintenance organisations. These blocks are specifically reserved for release/certification of newly manufactured items in accordance with certification procedures of products and parts of the State of Design or State of Manufacture (e.g. the US Federal Aviation Administration procedures as set forth in 14 CFR Part 21).

(*o*) *Block* 19. Return to Service. The information is already pre-printed in the block.

(*p*) *Block* 20. Signature. Signature of the individual authorised by the air agency, air carrier, or the manufacturer in accordance with 5.6.1.5 (*a*)(2), (3), and (4). The approval signature shall be manually applied at the time and place of issuance.

(*q*) *Block* 21. Certificate number. Enter the AMO or air operator operating certificate number. For manufacturers returning to service after rebuilding products/parts the production approval number shall be entered.

(*r*) *Block* 22. Name. The typed or printed name of the individual identified in Block 20.

(*s*) *Block* 23. Date. The date the NCAA Form One is signed and the product is returned to service. This does not need to be the same as the shipping date, which may occur at a later date.

Airworthiness Data - Instructions for Continued Airworthiness.

IS 6.5.1.9.—(*a*) The AMO shall be in receipt of all airworthiness data appropriate to support the work performed from the Authority, the aircraft/aeronautical product design organisation, and any other approved design organisation in the State of Manufacture or State of Design, as appropriate. Some examples of maintenance-related documents are :

(1) Civil Aviation Regulations.

(2) Associated advisory material.

(3) Airworthiness directives.

(4) Manufacturers' maintenance manuals.

(5) Repair manuals.

(6) Supplementary structural inspection documents.

(7) Service bulletins.

(8) Service letters.

(9) Service instructions.

(10) Alteration leaflets.

(11) Aircraft maintenance program.

(12) NDT Manual, etc.

(*b*) A procedure shall be established to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme.

(*c*) Airworthiness data shall be made available in the work area in close proximity to the aircraft or aeronautical product being maintained and for supervisors, mechanics, and certifying staff to study.

(*d*) Where computer systems are used to maintain airworthiness data, the number of computer terminals shall be sufficient in relation to the size of the work program to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 7—INSTRUMENTS AND EQUIPMENT

INTRODUCTION

Part 7 of these Regulations presents standards and recommended practices as regulatory requirements for instruments and equipment on aircraft expected to operate in Nigeria.

The requirements in Part 7 address two categories of aircraft operations—AOC holder and non-AOC holder operations. The sections of Part 7 applicable to all aircraft address minimum requirements and are noted by the key [AAC] preceding the particular section. It is important to note that the AAC designation also applies to all aircraft. Additional aircraft requirements relating to commercial air transport are noted by the key [AOC] for air operator certificate holders. Note: ICAO Annex 6, Part 1: 4.2.1.1 and Part III, Section II: 2.2.1.1 require that operators in commercial air transport have an air operator certificate.

In some instances, certain items such as Mach meters or sea anchors apply only to aircraft with performance characteristics requiring such items. Some [AAC] requirements apply to passenger-carrying aircraft. In such instances, the requirement addresses the operation of any passenger-carrying aircraft, most particularly turbine powered aircraft, which may have performance and range capabilities matching the type of aircraft operated by AOC holders. Similarly, some equipment specified for the [AOC] aircraft have sections keyed as [AAC].

The key [AAC] applies to all aircraft, whether on domestic or international flights. The key [AOC] applies to AOC holders operating in Nigeria, whether on domestic or international flights. Certain sections, such as those addressing MNPS airspace, may not address airspace contiguous to Nigeria, but anticipate that Nigerian AOC holder's aircraft may operate through such airspace in the course of commerce. Such requirements are intended to facilitate the integration of Nigerian AOC holders into such operations.

Part 7 includes survival equipment requirements that apply for operation in Nigeria as listed in ICAO Annex 6. The Authority is encouraged to review geographic areas within Nigeria, and designate those areas requiring additional, specific types of survival equipment.

NIGERIA CIVIL AVIATION REGULATIONS

PART 7— INSTRUMENTS AND EQUIPMENT

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NIGERIA CIVIL AVIATION REGULATIONS

PART 7— INSTRUMENTS AND EQUIPMENT

7.1 General

7.1.1.1—(*a*) Part 7 prescribes the minimum instrument and equipment requirements for all aircraft in all operations. Applicability.

(*b*) Part 7 requirements use the following key designators—

(1) AAC : all aircraft — non-AOC Holders and AOC Holders appropriate to the subject of the regulations, e.g., an all aircraft regulation may only refer to seaplanes, but will include seaplanes operated by non-AOC Holders and AOC seaplanes.

(2) AOC : AOC Holders are operators engaged in commercial air transport. Where AOC requirements are more detailed, the AOC requirements will be followed.

7.1.1.2—(*a*) For the purpose of Part 7, the following definitions shall apply— Definitions.

(1) *Airborne Image Recorder (AIR).*—A device that uses a combination of cameras to collect and record information that reflects the status of various parts of the aircraft (internal and external). Source: EUROCAE ED-112 "Minimum Operational Performance Specification for Crash Protected Airborne Recorder Systems," March 2003, paragraph 1-1.5.1.

(2) *Aircraft Data Recording System.*—A device or devices that use a combination of data providers to collect and record parameters that reflect the state and performance of an aircraft. Source: EUROCAE ED-155 "Minimum Performance Specification for Lightweight Flight Recording Systems," July 2009, paragraph 1-1.5.1.

(3) *Airworthy.*—The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

(4) *Area navigation* (*RNAV*).—A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note: Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

(5) *Category I* (*CAT I*) *operation.* A precision instrument approach and landing with:

(*i*) a decision height not lower than 60 m (200 ft) ; and

(*ii*) with either a visibility not less than 800 m or a runway visual range not less than 550 m.

(6) *Category II (CAT II) operation.*—A precision instrument approach and landing with :

(*i*) a decision height lower than 60m (200 ft), but not lower than 30 m (100 ft) ; and

(*ii*) a runway visual range not less 300m.

(7) *Category III A (CAT IIIA) operation.*—A precision approach and landing with :

(*i*) a decision height lower than 30 m (100 ft) or no decision height; and

(*ii*) a runway visual range not less than 175m.

(8) *Category III B (CAT IIIB) Operation.*—A precision approach and landing with :

(*i*) a decision height lower than 15 m (50 ft), or no decision height; and

(*ii*) a runway visual range less than 175 m but not less than 50 m.

(9) *Category III C (CAT IIIC) Operation.*—A precision instrument approach and landing with no decision height and no runway visual range limitations.

Note : Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach and landing operation would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation).

(10) *Cockpit Audio Recording System.*—A device that uses a combination of microphones and other audio and digital inputs to collect and record the aural environment of the cockpit and communications to, from and between the pilots. Source: EUROCAE ED-155 "Minimum Performance Specification for Lightweight Flight Recording Systems," July 2009, paragraph 1-1.5.1.

(11) *Continuing airworthiness.*—The set of processes by which all aircraft comply with the applicable airworthiness requirements and remain in a condition for safe operation throughout their operating life.

(12) *Controlled Flight Into Terrain.*—Occurs when an airworthy aircraft is flown, under the control of a qualified pilot, into terrain (water or obstacles) with inadequate awareness on the part of the pilot of the impending collision.

(13) *Datalink Recording System.* A device that records those messages whereby the flight path of the aircraft is authorised, controlled directly or indirectly, and which are relayed over a digital data-link rather than by voice communication. Source: EUROCAE ED-155 "Minimum Performance Specification for Lightweight Flight Recording Systems," July 2009, paragraph 1-1.5.1.

(14) *Emergency Locator Transmitter* (*ELT*).—A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following :

(*i*) *Automatic fixed ELT*.—An automatically activated ELT which is permanently attached to an aircraft.

(*ii*) *Automatic portable ELT.*—An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

(*iii*) *Automatic deployable ELT* (*ELT*(*AD*).—An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and in some cases, also be hydrostatic sensors. Manual deployment is also provided.

(*iv*) *Survival ELT*.—An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

(*v*) *ELT battery useful life*.—The length of time after its date of manufacture or recharge that the battery or battery pack may be stored under normal environmental conditions without losing its ability to allow the ELT to meet the applicable performance standards.

(*vi*) *ELT battery expiration date*.—The date of battery manufacture or recharge plus one half of its useful life.

(15) *Engine*.—A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).

(16) *Enhanced Ground Proximity Warning* (*EGPWS*).—A forward-looking warning system that uses the terrain database for terrain avoidance.

(17) *Enhanced Vision System* (*EVS*).—A system to display electronic real-time images of the external scene achieved through the use of image sensors.

(18) *Flight Manual*.—A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions information necessary to the flight crewmembers for the safe operation of the aircraft.

(19) *Flight Recorder.*—Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation. This could include the cockpit voice recorder (CVR) or flight data recorder (FDR).

(20) *Ground Proximity Warning System* (*GPWS*).—A warning system that uses radar altimeters to alert the pilots of hazardous flight conditions.

(21) *Head-up display* (*HUD*).—A display system that presents flight information into the pilot's forward external field of view.

(22) *High Speed Aural Warning.*—A speed warning that is required for turbine-engined airplanes and airplanes with a Vmo/Mmo greater than 0.80 Vdf/Mdf or Vd/Md.

(23) *Long Range Overwater Flights.*—Routes on which an aeroplane may be over water and at more than a distance corresponding to 120 minutes at cruising speed or 740 km (400 NM), whichever is the lesser, away from land suitable for making an emergency landing.

(24) *Low Altitude Wind Shear Warning and Guidance System.*—A system that will issue a warning of low altitude wind shear and in some cases provide the pilot with guidance information of the escape manoeuvre.

(25) *Mach Number Indicator.*—An indicator that shows airspeed as a function of the Mach number.

(26) *Maintenance programme.*—A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

(27) *Navigation Specification.*—A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications :

(*i*) Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

(*ii*) Area navigational (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1 :—*The Performance-based Navigation* (*PBN*) *Manual* (*Doc* 9613), *Volume II, contains detailed guidance on navigation specifications.*

Note 2 : *The term RNP, previously defined as "a statement of the navigation performance necessary for operation within a defined airspace", has been removed from this Annex as the concept of RN P has been overtaken by the concept of PBM. The term RNP in this Annex is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc* 9613.

(28) *Performance-based navigation* (*PBN*).—Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note :—Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

(29) *Terrain Awareness Warning System.*—A system that provides the flight crew with sufficient information and alerting to detect a potentially hazardous terrain situation and so the flight crew may take effective action to prevent a controlled flight into terrain (CFIT) event.

7.1.1.3—(*a*) The following acronyms are used in Part 7 : Abbreviations.

(1) AAC—All Aircraft.
(2) ADF—Automatic Direction Finder.
(3) ADRS—Aircraft Data Recording Systems (ADRS).
(4) AFM—Aeroplane Flight Manual.
(5) AIR—Airborne Image Recorder.
(6) AOC—Air Operator Certificate.
(7) CARS—Cockpit Audio Recording System.
(8) DLR—Data-link Recorder.
(9) DLRS—Data-link Recording Systems.
(10) ELT (AD)—Automatically Deployable ELT.
(11) ELT(AF)—Automatic Fixed ELT.
(12) ELT(AP)—Automatic Portable ELT.
(13) ELT(S)—Survival ELT.
(14) CAT—Commercial Air Transport.
(15) CAT I—Category One.
(16) CAT II—Category Two.
(17) CAT IIIA—Category Three A.
(18) CAT IIIB—Category Three B.
(19) CAT IIIC—Category Three C.
(20) CFIT—Controlled Flight Into Terrain.
(21) CVR—Cockpit Voice Recorder.
(22) DH—Decision Height.
(23) DME—Distance Measuring Equipment.
(24) ELT—Emergency Locator Transmitter.
(25) EVS—Enhanced Vision Systems.
(26) FDR—Flight Data Recorder.
(27) GPS—Global Positioning System.
(28) GPWS—Ground Proximity Warning System.
(29) HUD—Head Up Display.
(30) ILS—Instrument Landing System.

(31) IFR—Instrument Flight Rules.
(32) IMC—Instrument Meteorological Conditions.
(33) LRNS—Long Range Navigation Systems.
(34) MACH—Mach Number Indicator.
(35) MEL—Minimum Equipment List.
(36) MHz—Megahertz.
(37) MLS—Microwave Landing System.
(38) MNPS—Minimum Navigation Performance Specifications.
(39) NDB—Nondirectional Beacon.
(40) PBE—Protective Breathing Equipment.
(41) RNAV—Area Navigation.
(42) RNP—Required Navigation Performance.
(43) RVR—Runway Visual Range.
(44) RVSM—Reduced Vertical Separation Minimum.
(45) SSR—Secondary Surveillance Radar.
(46) TAWS—Terrain Awareness Warning System.
(47) VFR—Visual Flight Rules.
(48) VMC—Visual Meteorological Conditions.
(49) VOR—VHF Omnidirectional Radiorange.
(50) VSM—Vertical Separation Minimum.

General Instrument and Equipment Requirements.

7.1.1.4—(*a*) [AAC] In addition to the minimum equipment necessary for the issuance of a certificate of airworthiness, the instruments, equipment and flight documents prescribed in Part 7 shall be installed or carried, as appropriate, in aircraft according to the aircraft used and to the circumstances under which the flight is to be conducted.

(*b*) [AAC] All required instruments and equipment shall be approved and installed in accordance with applicable airworthiness requirements.

(*c*) [AAC] Prior to operation in Nigeria of any aircraft not registered in Nigeria that uses an airworthiness inspection programme approved or accepted by the State of Registry, the owner/operator shall ensure that instruments and equipment required by Nigeria but not installed in the aircraft are properly installed and inspected in accordance with the requirements of the State of Registry.

(*d*) [AOC] No person shall commence a flight in commercial air transport operations unless the required equipment—

(1) Meets the minimum performance standard, all operational and airworthiness requirements and the relevant provisions of ICAO Annex 10, Volume IV.

(2) Is installed such that the failure of any single unit required for either communication or navigation purposes, or both, will not result in the inability to communicate and/or navigate safely on the route being flown.

(3) Is in operable condition for the kind of operation being conducted, except as provided in the MEL.

(*e*) [AAC] If equipment is to be used by one flight crewmember at his or her station during flight, it shall be installed so as to be readily operable from that flight crewmember's station.

(*f*) [AAC] When a single item of equipment is required to be operated by more than one flight crewmember, it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

7.2. FLIGHT INSTRUMENTS

7.2.1.1.—*(a)* [AAC] All aircraft shall be equipped with flight instruments which will enable the flight crew to— General Requirements.

(1) Control the flight path of the aircraft ;

(2) Carry out any required procedural manoeuvres ; and

(3) Observe the operating limitations of the aircraft in the expected operating conditions.

(*b*) [AAC] When a means is provided for transferring an instrument from its primary operating system to an alternative system, the means shall include a positive positioning control and shall be marked to indicate clearly which system is being used.

(*c*) [AAC] Those instruments that are used by any one pilot shall be so arranged as to permit the pilot to see the indications readily from his or her station, with the minimum practicable deviation from the position and line of vision which he normally assumes when looking forward along the flight path.

7.2.1.2.—(*a*) [AAC] No person may operate any powered aircraft unless it is equipped with the following flight instruments : Minimum Flight Instruments.

(1) An airspeed indicating system calibrated in knots, miles per hour or kilometers per hour.

(2) Sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight.

(3) An accurate timepiece indicating the time in hours, minutes, and seconds.

(*i*) For non-AOC operations, either equipage or carriage is acceptable.

(4) A magnetic compass.

(5) Any other equipment as prescribed by the Authority.

Note : This applies to both VFR and IFR operation in addition to the additional requirements for IFR elsewhere in this Part.

(b) [AAC] No person may operate an aeroplane in VFR flight as a controlled flight unless it is equipped with the instruments in 7.2.1.4.

Instruments for Operations Requiring two Pilots in Day VFR.

7.2.1.3.—(*a*) [AOC] whenever two pilots are required, each pilot's station shall have separate flight instruments as follows :

(1) An airspeed indicator calibrated in knots, miles per hour or kilometers per hour ;

(2) A sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight ;

(3) A vertical speed indicator ;

(4) A turn and slip indicator, or a turn co-coordinator incorporating a slip indicator ;

(5) An attitude indicator ;

(*i*) A stabilised direction indicator, and

(*ii*) Any other equipment as required by the Authority.

Instruments Required for IFR Operations.

7.2.1.4—(*a*) [AAC] All aeroplanes when operated in IFR, or when the aircraft cannot be maintained in a desired altitude without reference to one or more flight instruments, shall be equipped with—

(1) A means of measuring and displaying :

(*i*) Magnetic heading (standby compass) ;

(*ii*) The time in hours, minutes and seconds ;

(A) For non-AOC operations, either equipage or carriage is acceptable.

(*iii*) Pressure altitude ;

(*iv*) Indicated airspeed, with a means of preventing malfunctioning due to either condensation or icing ;

(*v*) Turn and slip ;

(*vi*) Aircraft attitude ; and

(*vii*) Stabilised aircraft heading.

Note : The requirements of (*v*), (*vi*), *and* (*vii*) *may be met by combinations of instruments or by integrated flight director systems, provided that the safeguards against total failure, inherent in the three separate instruments, are retained.*

(*viii*) Whether the supply of power to the gyroscopic instruments is adequate ;

(*ix*) The outside air temperature ;

(*x*) Rate-of-climb and descent ; and

(2) In addition, for aeroplanes with a maximum certificated take-off mass exceeding 5700 kg or equipped with one or more turbojet engines—

(*i*) An emergency power supply for electrically operated attitude indicating instruments

(A) Independent of the main electrical generating system for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the pilot-in-command, and

(B) Automatically operative after the total failure of the main electrical generating system and clear indication given on the instrument panel that the attitude indicator(s) is being operated by emergency power ;

(*ii*) For aeroplanes with advanced cockpit automation systems (glass cockpits), system redundancy that provides the flight crew with attitude, heading, airspeed and altitude indications in case of failure of the primary system or display ; and

(*iii*) two independent altitude measuring and display systems.

(3) Such additional instruments or equipment as may be prescribed by the appropriate authority.

(*b*) [AOC] All aeroplanes when operated in IFR, or when the aircraft cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with—

(1) For all aeroplanes :

(*i*) A magnetic compass ;

(*ii*) An accurate timepiece indicating the time in hours, minutes and seconds;

(*iii*) Two sensitive pressure altimeters with counter drum-pointer or equivalent presentation:

Note : *Neither three-pointer nor drum-pointer altimeters satisfy this requirement.*

(*iv*) An airspeed indicating system with a means of preventing malfunctioning due to either condensation or icing;

(*v*) A turn and slip indicator aeroplanes or a slip indicator for helicopters;

(*vi*) Attitude indicator (artificial horizon);

(*vii*) A heading indicator (directional gyroscope);

Note : *The requirements of items (v), (vi) and (vii) may be met by combinations of instruments or by integrated flight director systems provided that the safeguards against total failure, inherent in the separate instruments are retained;*

(*viii*) A means of indicating whether the supply of power to the gyroscopic instruments is adequate ;

(*ix*) A means of indicating in the flightcrew compartment the outside air temperature ;

(*x*) A rate-of-climb and descent indicator;

(2) In addition, for aeroplanes with a maximum certificated take-off mass exceeding
5 700 kg—

(*i*) An emergency power supply for electrically operated attitude indicating instruments

(*ii*) Independent of the main electrical generating system for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the pilot-in-command, and

(*iii*) Automatically operative after the total failure of the main electrical generating system and clear indication given on the instrument panel that the attitude indicator(s) is being operated by emergency power ; and

(3) Such additional instruments or equipment as may be prescribed by the Authority.

(*c*) [AOC] No person may operate an aeroplane under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks, unless the aeroplane is equipped with navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation.

(1) [AOC] No person may conduct single pilot IFR operations unless the aeroplane is equipped with an autopilot with at least altitude hold and heading mode.

(2) [AAC] No person may operate an aeroplane under IFR unless it is equipped with an audio selector panel accessible to each required flight crewmember.

(3) [AOC] No person may conduct single pilot IFR or night operations in commercial air transport operations unless the aeroplane is equipped with a headset with boom microphone or equivalent and a transmit button on the control wheel.

(*d*) [AAC] All helicopters, unless otherwise indicated, when operated in IFR, or when the aircraft cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with—

(1) All helicopters :

(*i*) A magnetic compass ;

(*ii*) An accurate timepiece indicating the time in hours, minutes and seconds ;

(A) For non-AOC operations, either equipage or carriage is acceptable.

(*iii*) Pressure altimeter :

(A) [AAC] a sensitive pressure altimeter ;

(B) [AOC] two sensitive pressure altimeters;

Note: Due to the long history of misreadings, the use of drum-pointer altimeters is not recommended.

(*iv*) An airspeed indicating system with a means of preventing malfunctioning due to either condensation or icing ;

(*v*) A slip indicator ;

(*vi*) Attitude indicator (artificial horizon) for each required pilot and one additional attitude indicator ;

(*vii*) A heading indicator (directional gyroscope) ;

(*viii*) A means of indicating whether the supply of power to the gyroscopic instruments is adequate ;

(ix) A means of indicating in the flightcrew compartment the outside air temperature ;

(x) A rate-of-climb and descent indicator ;

(xi) A stabilisation system, unless it has been demonstrated to the satisfaction of the certifying Authority that the helicopter possesses, by nature of its design, adequate stability without such a system ;

(2) [AOC] An emergency power supply for electrically operated attitude indicating instruments

(*i*) Independent of the main electrical generating system for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the pilot-in-comment, and

(ii) Automatically operative after the total failure of the main electrical generating system and clear indication given on the instrument panel that the attitude indicator(s) is being operated by emergency power ; and

(3) Such additional instruments or equipment as may be prescribed by the Authority.

Instruments for Operation at Night.

7.2.1.5—(a) [AAC] No person may operate an aeroplane at night unless it is equipped with the following :

(1) the instruments in 7.2.1.4 appropriate to the aircraft and operation ;

(2) the lights specified in 7.5 :

(b) [AOC] No person may operate an aeroplane at night unless it is equipped with the following :

(1) the instruments in 7.2.1.4 appropriate to the aircraft and operation ;

(2) the lights in 7.5. :

(*c*) [AAC] No person may operate a helicopter at night unless it is equipped with the following :

(1) the instruments in 7.2.1.4 appropriate to the aircraft and operation ;

(2) an attitude indicator (artificial horizon) for each required pilot;

(3) a slip indicator ;

(4) a heading indicator (directional gyroscope) ;

(5) a rate of climb and descent indicator ;

(6) the lights in 7.5 :

(7) Such additional instruments or equipment as may be prescribed by the Authority.

Standby Attitude Indicator.

7.2.1.6.—(*a*) [AAC] No person may operate an aeroplane with a maximum certified take-off mass exceeding 5,700 kg or a performance Class 1 or 2 helicopter unless it is equipped with a single standby attitude indicator (artificial horizon) that—

(1) Operates independently of any other attitude indicating system ;

(2) Is powered continuously during normal operation ; and

(3) After a total failure of the normal electrical generating system, is automatically powered for a minimum of 30 minutes from a source independent of the normal electrical generating system.

(*b*) [AAC] When the standby attitude indicator is being operated by emergency power, it shall be clearly operating and illuminated to the flight crew.

(*c*) [AAC] Where the standby attitude indicator has its own dedicated power supply there shall be an associated indication, either on the instrument or on the instrument panel when this supply is in use.

(*d*) [AAC] If the standby attitude instrument system is installed and usable through flight attitudes of 360? of pitch and roll, the turn and slip indicators may be replaced by slip indicators.

Instruments and Equipment for Category II Operations.

7.2.1.7—(*a*) The instruments and equipment listed in this subsection shall be installed, approved and maintained in accordance with IS: 7.2.1.7 for each aircraft operated in a Category II operation :

Note : *This subsection does not require duplication of instruments and equipment required by 7.2.1.2 or any other provisions of this Part.*

(1) Group I is comprised of the following equipment and this equipment must be inspected both within three calendar months of the previous inspection and must also have a bench inspection within 12 months of the previous bench inspection using procedures contained in the approved maintenance programme.

(*i*) Two localizer and glide slope receiving systems.

Note : *Each system shall provide a basic ILS display and each side of the instrument panel must have a basic ILS display. However, a single localizer antenna and a single glide slope antenna may be used.*

(*ii*) A communications system that does not affect the operation of at least one of the ILS systems.

(*iii*) A marker beacon receiver that provides distinctive aural and visual indications of the outer and the middle markers.

(*iv*) Two gyroscopic pitch and bank indicating systems.

(*v*) Two gyroscopic direction indicating systems.

(*vi*) Two airspeed indicators.

(*vii*) Two sensitive altimeters adjustable for barometric pressure, having markings at 20 foot intervals and each having a placarded correction for altimeter scale error and for the wheel height of the aircraft.

(*viii*) One self-monitoring radio altimeter with dual display.

(*ix*) Two vertical speed indicators.

(*x*) A flight control guidance system that consists of either an automatic approach coupler or a flight director system.

Note : *A flight director system must display computed information as steering command in relation to an ILS localizer and, on the same instrument, either computed information as pitch command in relation to an ILS glide slope or basic ILS glide slope information. An automatic approach coupler must provide at least automatic steering in relation to an ILS localizer. The flight control guidance system may be operated from one of the receiving systems required by paragraph (a)(1)(i).*

(xi) For Category II operations with decision heights below 150 feet a radio altimeter is required.

(2) Group II is comprised of the following equipment and this equipment which, with the exception of the static system, does not require special maintenance procedures other than those necessary to retain the original approval condition. Group II equipment must be inspected within 12 months of the previous inspection using procedures contained in the approved maintenance programme.

(*i*) Warning systems for immediate detection by the pilot of system faults in items (*a*)(1)(I), (*a*)(1)(*iv*), (*a*)(1)(*iv*) and (*a*)(1)(*ix*), of Group I

(*ii*) Dual controls.

(*iii*) An externally vented static pressure system with an alternate static pressure source.

(*iv*) A windshield wiper or equivalent means of providing adequate cockpit visibility for a safe visual transition by either pilot to touchdown and rollout.

(*v*) A heat source for each airspeed system pitot tube installed or an equivalent means of preventing malfunctioning due to icing of the pitot system.

Instruments and Equipment for Category III Operations.

7.2.1.8—(*a*) The instruments and equipment listed in this subsection shall be installed, approved and maintained in accordance with international acceptable criteria and the AFM in each aircraft operated in a Category III operation :

Note 1: *This subsection does not require duplication of instruments and equipment required by* 7.2.1.2, *and* 7. 2.1.7 *or any other provisions of this Part.*

(*b*) Airborne systems for CAT IIIA minima not less than RVR 200 m (600 ft) : The following equipment in addition to the instrument and navigation equipment required by this Part for IFR flight and CAT II operations is the minimum aircraft equipment required for CAT IIIA :

(1) A redundant flight control or guidance system demonstrated in accordance with international acceptable criteria. Acceptable flight guidance or control systems include the following—

(*i*) A Fail Operational or Fail Passive automatic landing system as least to touchdown ;

(*ii*) A Fail Operational or Fail Passive manual flight guidance system providing suitable head-up or head-down command guidance, and suitable monitoring capability at least to touchdown;

(*iii*) A hybrid system, using automatic landing capability as the primary means of landing at least to touchdown ; or

(*iv*) Other system that can provide an equivalent level of performance and safety.

(2) An automatic throttle or automatic thrust control system that meets approved criteria as specified in the AFM. However, for operations with a 15 m (50 ft) DH, or other operations that have been specifically evaluated such as for engine inoperative landing capability, automatic throttles may not be required if it has been demonstrated that operations can be safely conducted, with an acceptable work load, without their use.

(3) At least two independent navigation receivers/sensors providing lateral and vertical position or displacement information, typically with the first pilot's station receiving the information from one and the second pilot's station receiving the information from the other. The navigation receivers/sensors shall meet the criteria specified for CAT IIIA operations.

(4) At least two approved radio altimeter systems that meet the performance requirements criteria as specified in the AFM, typically with the first pilot's station receiving information from one and the second pilot's station receiving information from the other.

(5) Failure detection, annunciation, and warning capability, as determined acceptable by criteria in the AFM.

(6) Missed approach guidance provided by one or more of the following means :

(*i*) Attitude displays that include suitable pitch attitude markings, or a pre-established computed pitch command display.

(*ii*) An approved flight path angle display, or

(*iii*) An automatic or flight guidance go-around capability.

(7) Suitable forward and side flight deck visibility for each pilot as specified in the AFM.

(8) Suitable windshield rain removal, ice protection, or defog capability as specified in the AFM.

(*c*) Airborne systems for CAT IIIB minima less than RVR 200 m (600 ft) but not less than RVR 125 m (400 ft). The following equipment in addition to the instrument and navigation equipment required by this Part for IFR flight and CAT II and CAT IIIA operations is the minimum aircraft equipment required for CAT IIIB plus the following extra equipment requirements :

(1) A redundant flight control or guidance system demonstrated in accordance with international acceptable criteria. Acceptable flight guidance or control systems include the following—

(*i*) A Fail Operational landing system with a Fail Operational or Fail Passive automatic rollout system ; or

(*ii*) A Fail Passive landing system, limited to touchdown zone RVR not less than RVR 200 m (600 ft), with Fail Passive rollout provided automatically or by a flight guidance system providing suitable head-up or head-down guidance, and suitable monitoring capability, or

(iii) A Fail Operational hybrid automatic landing and rollout system with comparable manual flight guidance system, using automatic landing capability as the primary means of landing; or

(*iv*) Other system that can provide an equivalent level of performance and safety.

(2) An automatic throttle or automatic thrust control that meets the appropriate criteria as specified in the AFM. However for operations with a 15 m (50 ft) DH, automatic throttles may not be required if it has been demonstrated that operations can safely be conducted, with an acceptable work load, without their use.

(3) At least two independent navigation receivers/sensors providing lateral and vertical position or displacement information, typically with the first pilot's station receiving information from one and the second pilot's station receiving information from the other. The navigation receivers/sensors shall meet the criteria specified in the AFM.

(4) At least two approved radio altimeter systems that need the performance criteria outlined in the AFM, typically with the first pilot's station receiving information from one and the second pilot's station receiving information from the other.

(5) Failure detection, annunciation and warning capability as specified in the AFM.

(6) Missed approach guidance provided by one or more of the following means :

(*i*) Attitude displays that include calibrated pitch attitude markings, or a pre-established computed pitch command display ;

(*ii*) An approved flight path angle display ; or

(*iii*) An automatic or flight guidance go-around capability.

(7) Suitable forward and side flight deck visibility for each pilot, as specified in the AFM.

(8) Suitable windshield rain removal, ice protection, or defog capability as specified in the AFM.

(*d*) Airborne systems for CAT IIIC minima less than RVR 75 m (300 ft). The following equipment in addition to the instrument and navigation equipment required by this Part for IFR flight and CAT II, CAT IIIA and CAT IIIB operations is the minimum aircraft equipment required for CAT IIIC :

(1) A Fail Operational Automatic Flight Control System, or manual flight guidance system designed to meet fail operational system criteria, or a hybrid system in which both the fail-passive automatic system and the monitored manual flight guidance components provide approach and flare guidance to touchdown, and in combination provide full fail operational capability, and

(2) A fail operational automatic, manual, or hybrid rollout control system.

Aircraft Equipped with Head-Up Displays (HUD) and/or Enhanced Vision Systems (EVS).

7.2.1.9—(*a*) [AAC] Where aircraft are equipped with HUD and/or EVS, the use of such systems to gain operational benefit shall be approved by the State of the Operator.

(*b*) [AAC] In approving the operational use of automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS, the State of the Operator shall ensure that :

(1) the equipment meets the appropriate airworthiness certification requirements ;

(2) t he operator has carried out a safety risk assessment of the operations supported by the automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS ;

(3) the operator has established and documented the procedures for the use of, and training requirements for, automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS.

Electronic Flight Bags (EFBs).

7.2.1.10—(*a*) [AAC] Where portable EFBs are used on board an aeroplane, the operator shall ensure that they do not affect the performance of the aircraft systems, equipment or the ability to operate the aeroplane.

(*b*) Where EFBs are used on board an aircraft the operator shall :

(1) assess the safety risk(s) associated with each EFB function ;

(2) establish and document the procedures for the use of, and training requirements for, the device and each EFB function ; and

(3) ensure that, in the event of an EFB failure, sufficient information is readily available to the flight crew for the flight to be conducted safely.

(*c*) The State of the Operator shall approve the operational use of EFB functions to be used for the safe operation of aircarft.

(*d*) In approving the use of EFBs, the State of the Operator shall ensure that :

(1) the EFB equipment and its associated installation hardware, including interaction with aircraft systems if applicable, meet the appropriate airworthiness certification requirements ;

(2) the operator has assessed the safety risks associated with the operations supported by the EFB function(s) ;

(3) the operator has established requirements for redundancy of the information (if appropriate) contained in and displayed by the EFB function(s) ;

(4) the operator has established and documented procedures for the management of the EFB function(s) including any database it may use ; and

(5) the operator has established and documented the procedures for the use of, and training requirements for, the EFB and the EFB function(s).

7.3 COMMUNICATIONS EQUIPMENT

Radio Equipment.

7.3.1.1—(*a*) [AAC] No person may operate an aircraft unless it is equipped with radio communication equipment required for the kind of operation being conducted.

(*b*) [AAC] All aircraft operated in VFR as a controlled flight, in IFR, at night, extended flight over water, or over land designated by the Authority as especially difficult for search and rescue, shall be equipped with radio communication equipment—

(1) Capable of conducting two-way communication at any time with air traffic services or aeronautical stations ;

(2) Capable of conducting communications on those frequencies prescribed by the Authority ;

(3) Capable of receiving meteorological information at any time during the flight ;

(4) Capable of conducting communications on the aeronautical emergency frequency 121.5 MHz ;

(5) Approved and installed in accordance with the requirements applicable to them, including the minimum performance requirements ;

(6) Installed such that the failure of any single unit required for communication equipment, will not result in the failure of another unit required for communications purposes ; and

(7) Meeting any other requirements as prescribed by the Authority.

Note : *The requirements in (b)(1)-(3) are considered fulfilled if the ability to conduct the communications specified therein is established during radio propagation conditions which are normal for the route.*

(*c*) [AAC] For flights in defined portions of airspace or on routes where a Required Communications Performance (RCP) type has been prescribed, the aeroplane shall, in addition to the requirements in (a) and (b) above :

(1) Be provided with communication equipment which will enable it to operate in accordance with the prescribe RCP type(s) ; and

(2) Be authorised by Nigeria for operations in such airspace.

Note : *Information on RCP and associated procedures, and guidance concerning the approval process, are contained in ICAO Doc 9869, Manual on Required Communications Performance (RCP). This document also contains references to other documents produced by States and international bodies concerning communication systems and RCP.*

(*d*) [AOC] No person may operate an aircraft in commercial air transport operations, or as otherwise specified by the Authority, unless it is equipped with two independent radio communications systems, appropriate to the route and airspace used.

(*e*) [AAC] When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

7.3.1.2—(*a*) [CAT] No person may operate an aeroplane in commercial air transport operations on which a flight crew of more than one is required unless it is equipped with a flight crew interphone system, including headsets and microphones, not of a handheld type, for use by all members of the flight crew.

Flightcrew and Crew member Interphone System for aeroplanes.

(*b*) [CAT] No person may operate an aeroplane in commercial air transport operations with a maximum certified take-off mass exceeding 15,000 kg, or having an approved passenger seating capacity of 19 or more, or having a flight crew compartment door, unless it is equipped with a crew member interphone system that—

(1) Operates independently of the public address system except for handsets, headsets, microphones, selector switches and signalling devices.

(2) Provides a means of two-way communication between the flight crew compartment and each—

(*i*) Passenger compartment ;

(*ii*) Galley located other than on a passenger deck level ; and

(*iii*) Remote crew compartment that is not on the passenger deck and is not easily accessible from a passenger compartment.

(3) Is readily accessible for use—

(*i*) From each of the required flight crew stations in the flight crew compartment ; and

(*ii*) At required cabin crewmember stations close to each separate or pair of floor level emergency exits.

(4) Has an alerting system incorporating aural or visual signals for use by flight crewmembers to alert the cabin crew, and for use by cabin crewmembers to alert the flight crew in the event of suspicious activity or security breaches in the cabin.

(5) Has a means for the recipient of a call to determine whether it is a normal call or an emergency call.

(6) Provides on the ground a means of two-way communication between ground personnel and at least two flight crewmembers.

7.3.1.3—(*a*) [AOC] No. AOC holder may operate a passenger carrying aeroplane with a maximum approved passenger seating configuration of more than 19 unless a public address system is installed that—

Public Address System—AOC Holders.

(1) Operates independently of the interphone systems except for handsets, headsets, microphones, selector switches and signalling devices.

(2) Be readily accessible for immediate use from each required flight crewmember station.

(3) For each required floor level passenger emergency exit which has an adjacent cabin crew seat, has a microphone which is readily accessible to the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated cabin crew members.

(4) Is capable of operation within 10 seconds by a cabin crewmember at each of those stations in the compartment from which its use is accessible.

(5) Is audible and intelligible at all passenger seats, toilets, and cabin crew seats and workstations.

(*b*) [AOC] No AOC holder may operate a passenger carrying helicopter with a maximum approved passenger seating configuration of more than 19 unless a public address system is installed that—

(1) Operates independently of the interphone systems except for handsets, headsets, microphones, selector switches and signalling devices.

(2) Be readily accessible for immediate use from each required flight crewmember station.

(3) For each required floor level passenger emergency exit which has an adjacent cabin crew seat, has a microphone which is readily accessible to the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated cabin crew members.

(4) Is capable of operation within 10 seconds by a cabin crewmember at each of those stations in the compartment from which its use is accessible.

(5) Is audible and intelligible at all passenger seats, toilets, and cabin crew seats and workstations.

(6) Following a total failure of the normal electrical generating system, provide reliable operation for a minimum of 10 minutes.

(*c*) [AOC] No AOC holder may operate a passenger carrying helicopter with a maximum approved passenger seating configuration of more than 9 but less than 19 without a public address system installed unless—

(1) The helicopter is designed without a bulkhead between pilot and passengers ; and

(2) The operator is able to demonstrate in a manner acceptable to the Authority that when in flight, the pilot's voice is audible and intelligible at all passenger seats.

Microphones.

7.3.1.4.—(A) Equippage. No person may operate the following Aircraft or in the following conditions unless the aircraft is equipped with a boom or throat microphone available at each required flight crew member Flight Duty Station.

(1) [AAC—Aeroplane] Any aeroplane in IFR conditions ;

(2) [AOC—Aeroplane] Any aeroplane in commercial air transport operations ;

(3) [AAC-Helicopter] Any helicopter.

(*b*) *Usage*.—All flight crew members required to be on flight deck duty shall communicate through boom or throat microphones under the following operations or conditions :

(1) [AAC-Aeroplane] During IFR operations ;

(2) [AOC- Aeroplane] Below the transition level/altitude ;

(3) [AAC – Helicopter] At all times.

7.4 NAVIGATION EQUIPMENT

7.4.1.1—(a) [AAC] No person may operate an aircraft unless it is equipped with navigation equipment that will enable it to proceed in accordance with— General.

(1) Its operational flight plan ; and

(2) The requirements of air traffic services.

(*b*) No person may operate flights in defined portions of airspace, including MNPS, RVSM, or any other routes where a navigation specification for performance-based navigation (PBN) has been prescribed unless it—

(1) Has received authorisation by the Authority for such operations ; and

(2) Is equipped with the navigation equipment to enable it to operate in accordance with the prescribed navigation specification(s) ; and

(3) Is equipped with navigation equipment that continuously provides information to the flight crew of adherence to or departure from track with respect to the required degree of accuracy at any point along that track.

(*c*) No person may operate an aircraft unless it has sufficient navigation equipment that will enable the aircraft to navigate in accordance with paragraphs (*a*) and (*b*) above, such that—

(1) In the event of the failure of any piece of navigation equipment at any stage of flight, the remaining equipment will enable the aircraft to continue to navigate ; and

(2) The failure of any single unit required for either communications or navigation purposes or both will not result in the failure of another unit required for communications or navigation purposes.

(*d*) The equipment requirements in paragraph (*a*) do not apply in instances where the Authority has authorised VFR by visual reference to landmarks.

(*e*) [AAC] No person may operate an aeroplane under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks, unless the aeroplane is equipped with navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation.

(*f*) [AAC] All aircraft intended to land in IMC or at night shall be provided with radio navigation equipment capable of receiving signals providing guidance to—

(1) A point from which a visual landing can be effected ;

(2) Each aerodrome at which it is intended to land in IMC ; and

(3) Any designated alternate aerodromes.

MNPS.

7.4.1.2.—*(a)* [AAC] No person may operate an aeroplane in MNPS airspace unless it is equipped with navigation equipment that—

(1) Continuously provides indications to the flightcrew of adherence to or departure from track to the required degree of accuracy at any point along that track ; and

(2) Has been authorised by the Authorityfor MNPS operations concerned through either operations specifications for AOC holders or letter of authorisation for general aviation.

Note : *Equipment shall comply with minimum navigation performance specifications prescribed in ICAO Doc 7030 in the form of Regional Supplementary Procedures.*

(*b*) [AAC] The navigation equipment required for operations in MNPS airspace shall be visible and usable by either pilot seated at his duty station.

(*c*) [AAC] For unrestricted operation in MNPS airspace, an aeroplane shall be equipped with two independent Long-Range Navigation Systems (LRNS).

(*d*) [AAC] For operation in MNPS airspace along notified special routes, an aeroplane shall be equipped with one LRNS, unless otherwise specified.

Reduced Vertical Separation Minimum.

7.4.1.3.—(*a*) [AAC] For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1,000 ft) is applied between FL 290 and FL 410 inclusive, an aeroplane :

(1) Shall be provided with equipment that is capable of :

(i) Indicating to the flightcrew the flight level being flown ;

(ii) Automatically maintaining a selected flight level ;

(iii) Providing an alert to the flightcrew when a deviation occurs from the selected flight level. The threshold for the alert shall not exceed + or – 90 m (300 ft) ; and

(iv) Automatically reporting pressure-altitude and

(2) Shall be authorised for operations in the airspace concerned by—

(*i*) The State of Operator for AOC holders through operations specifications, or

(*ii*) The State of Registry for non-AOC holders through letter of authorisation.

(3) Shall satisfy the demonstration requirements specified in IS 7.4.1.3 as to the altimetry system performance requirements for vertical navigation performance capability.

(*b*) Prior to granting an RVSM approval required by paragraph (a)(2), the Authority shall be satisfied that :

(1) The vertical navigation performance capability of the aeroplane satisfies the requirements specified in IS 7.4.1.3 ;

(2) The operator has instituted appropriate procedures in respect of continued airworthiness (maintenance and repair) practices and programmes ; and

(3) The operator has instituted appropriate flightcrew procedures for operations in RVSM airspace.

Note : *An RVSM approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the operations manual or appropriate crew guidance.*

(*c*) RVSM. The Authority in consultation with the State of Registry, if appropriate, shall ensure that, in respect of those aeroplanes mentioned in item (*a*)(2) above, adequate provisions exist for :

(1) Receiving the reports of height-keeping performance issued by the monitoring agencies established in accordance with ICAO Annex 11, 3.3.4.1; and

(2) Taking immediate corrective action for individual aircraft, or aircraft type groups, identified in such reports as not complying with the height-keeping requirements for operations in airspace where RVSM is applied.

(*d*) An operator with RVSM approval shall ensure that a minimum of two aeroplanes of each aircraft type grouping of the operator have their height-keeping performance monitored, at least once every two years or within intervals of 1 000 flight hours per aeroplane, whichever period is longer. If an operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

(*e*) An operator shall ensure that each aeroplane shall be sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment will enable the aeroplane to navigate in accordance with paragraphs (*a*), (*b*) and (*c*) of 7.4.1.3.

(f) RVSM. The Authority will take appropriate action in respect of aircraft and operators found to be operating in RVSM airspace in Nigeria without a valid RVSM approval.

Note 1: *These provisions and procedures need to address both the situation where the aircraft in question is operating without approval in the airspace of the State, and the situation where an operator for which the State has regulatory oversight responsibility is found to be operating without the required approval in the airspace of another State.*

Electronic Navigation Data Management.

7.4.1.4.—(*a*) Electronic navigation data management. [AAC] No person shall employ electronic navigation data products that have been processed for application in the air and on the ground unless the Authority has approved :

(1) The operator's procedures for ensuring that the process applied and the products delivered have acceptable standards of integrity and that the products are compatible with the intended function of the equipment that will use them ;

(2) The operator's programme for continual monitoring of both process and products ; and

(3) The operator's procedures to ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aircraft that require it.

Altitude Reporting Transponder.

7.4.1.5.—(*a*) [AAC] No person may operate an aeroplane or helicopter unless it is equipped with an operative pressure-altitude reporting transponder that operates in accordance with the requirements of Nigerian air traffic services and the relevant provisions of ICAO Annex 10, Volume 4.

(*b*) [AAC] No person may operate an aircraft in airspace that requires a pressure reporting transponder unless that equipment is operative.

(*c*) [AOC] No person may operate an aeroplane unless it is equipped with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft) or better.

(*d*) [AOC] No person may operate an aeroplane that is equipped with an automatic means of detecting airborne/on-the-ground status unless it is equipped with a Mode S transponder.

7.5 Aircraft Lights and Instrument Illumination

Required Aircraft Lights and Instrument Illumination.

7.5.1.1.—(*a*) [AAC] All aircraft operated at night by, shall be equipped with :

(1) A landing light ;

(2) Navigation/position lights ;

(3) Illumination for all flight instruments and equipment that are essential for the safe operation of the aircraft ;

(4) Lights in all passenger compartments ; and

(5) A flashlight for each crewmember station (approval not required).

(b) All aircraft type certificated with aviation red or aviation white anti-collision system shall have the anti-collision system operative in both day and night. In the event of the failure of any light of the anti-collision light system, operation of the aircraft may continue to a location where repairs or replacement can be made.

7.5.1.2—(*a*) [AOC] No person may operate an aircraft in commercial air transport operations unless it is equipped with : Required Aircraft Lights and Instrument Illumination for Commercial Air Transport Operations.

(*b*) Two landing lights or a single light having two separately energised filaments ;

(*c*) An anti-collision light system ;

(*d*) Illumination for all flight instruments and equipment that are essential for the safe operation of the aircraft ;

(*e*) Lights in all passenger compartments ;

(*f*) A flashlight for each crew member station ;

(g) Navigation/position lights ; and

(*h*) Lights to conform to the International regulations for preventing collisions at sea if the aircraft is a seaplane or an amphibian aircraft ;

(*i*) For helicopters—a landing light that is trainable, at least in the vertical plane.

7.6 ENGINE INSTRUMENTS

7.6.1.1—(*a*) [AAC] Unless the Authority allows or requires different instrumentation for turbine engine powered aeroplanes to provide equivalent safety, no person may operate any powered aircraft without the following engine instruments : Engine Instruments.

(1) A means for indicating fuel quantity in each fuel tank to be used.

(2) An oil pressure indicator for each engine.

(3) An oil temperature indicator for each engine.

(4) A manifold pressure indicator for each altitude engine.

(5) A tachometer for each engine.

(*b*) [AOC] Unless the Authority allows or requires different instrumentation for turbine engine powered aeroplanes to provide equivalent safety, in addition to the listed equipment requirements in paragraph (*a*), no person may operate any powered aircraft without the following engine instruments :

(1) A carburettor air temperature indicator for each piston engine.

(2) A cylinder head temperature indicator for each air-cooled piston engine.

(3) A fuel pressure indicator for each engine.

(4) A fuel flowmeter or fuel mixture indicator for each engine not equipped with an automatic altitude mixture control;

(5) An oil quantity indicator for each oil-tank when a transfer or separate oil reserve supply is used.

(6) An independent fuel pressure warning device for each engine or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device.

(7) A device for each reversible propeller, to indicate to the pilot when the propeller is in reverse pitch, which complies with the following :

(*i*) The device may be actuated at any point in the reversing cycle between the normal low pitch stop position and full reverse pitch, but it may not give an indication at or above the normal low pitch stop position.

(*ii*) The source of indication shall be actuated by the propeller blade angle or be directly responsive to it.

7.7 WARNING INSTRUMENTS AND SYSTEMS

MACH Number Indicator

7.7.1.1—(*a*) [AAC] All aeroplanes with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.

Loss of Pressurisation Indicator

7.7.1.2—(*a*) [AAC] All pressurised aircraft intended to be operated at flight altitudes above 25,000 feet shall be equipped with a device to provide positive warning to the flightcrew of any dangerous loss of pressurisation.

Landing Gear Indicator Position and Aural Warning Device

7.7.1.3—(*b*) [AAC] Each powered civil aircraft with retractable landing gear shall have a landing gear position indicator.

(*c*) [AOC] Each aeroplane with retractable landing gear shall have an aural warning device that functions continuously under the following conditions :

(1) For aeroplanes with an established approach wing-flap position, whenever the wing flaps are extended beyond the maximum certified approach climb configuration position in the Aeroplane Flight Manual and the landing gear is not fully extended and locked.

(2) For aeroplanes without an established approach climb wing-flap position, whenever the wing flaps are extended beyond the position at which landing gear extension is normally performed and the landing gear is not fully extended and locked.

(*d*) [AOC] The warning system required by paragraph (b) of this section :

(1) May not have a manual shutoff;

(2) Shall be in addition to the throttle-actuated device installed under the type certification airworthiness requirements; and

(3) May utilise any part of the throttle-actuated system including the aural warning device.

(e) [AOC] The flap position-sensing unit required in paragraph (b) may be installed at any suitable place in the aeroplane.

Altitude Alerting System

7.7.1.4—(a) [AAC] No person may operate a turbine powered aeroplane with a maximum certified take-off mass in excess of 5,700 kg or having a maximum approved passenger seating configuration of more than 9 seats, or a turbojet powered aeroplane, unless it is equipped with an altitude alerting system capable of—

(1) Alerting the flightcrew upon approaching preselected altitude in either ascent or descent; and

(2) Alerting the flightcrew by at least an aural signal, when deviating above or below a preselected altitude.

(b) [AAC] For operations in defined portions of airspace where, based on Regional Air Navigation Agreement, a VSM of 300 m (1,000 ft) is applied above FL 290, an aircraft shall be provided with equipment which is capable of providing an alert to the flightcrew when a deviation occurs from the selected flight level. The threshold for the alert may not exceed ±90 m (300 ft).

Ground Proximity Warning System

7.7.1.5—(*a*) [AAC] No operator may operate a turbine-powered aeroplane, or piston-engined aeroplane of a maximum certificated take-off mass in excess of 5,700kg or authorised to carry more than nine passengers, unless it is equipped with a ground proximity warning system that has a forward looking terrain avoidance function.

(*b*) [AAC] Each ground proximity warning system shall automatically provide, by means of aural signals which may be supplemented by visual signals, timely and distinctive warning to the flight crew of the following circumstances—

(1) Excessive descent rate.

(2) Excessive terrain closure rate.

(3) Excessive altitude loss after take-off or go-around.

(4) Unsafe terrain clearance while not in landing configuration;

(*i*) Gear not locked down ;

(*ii*) Flaps not in a landing position ; and

(5) Excessive descent below the instrument glide path.

Weather Radar.

7.7.1.6—*(a)* [AOC] No person may operate an aeroplane in commercial air transport in an area where thunderstorms or other potentially hazardous weather conditions may be expected unless it is equipped with a weather radar.

(*b*) [AOC] No person may operate a helicopter in commercial air transport when carrying passengers in an area where thunderstorms or other potentially hazardous weather conditions may be expected unless it is equipped with a weather radar.

(*c*) [AAC] No person may operate a pressurized aeroplanes with maximum certificated take-off mass exceeding 5700kg in an area where thunderstorms or other potentially hazardous weather conditions may be expected unless it is equipped with a weather radar.

Airborne Collision Avoidance System (ACAS).

7.7.1.7.—(*a*) [AAC] Any airborne collision avoidance system installed on an aircraft in Nigeria shall be approved by the Authority.

(*b*) [AAC] Each person operating an aircraft equipped with an airborne collision avoidance system shall have that system on and operating.

(*c*) [AAC] No person may operate a turbine engine aeroplane for which the individual airworthiness certificate was first issued after 24 November 2005 with a maximum certificated take-off mass in excess of 15,000 kg or authorised to carry more than 30 passengers, unless it is equipped with an ACAS II.

(*d*) [AAC] No person may operate a turbine engine aeroplane for which the individual airworthiness certificate was first issued after 1 January 2007 with a maximum certificated take-off mass in excess of 5,700 kg but not exceeding 15,000 kg or authorised to carry more than 19 passengers, unless it is equipped with an ACAS II.

(*e)* [AAC] An airborne collision avoidance system shall operate in accordance with the relevant provisions of ICAO Annex 10, Volume IV.

(*f*) [AOC] No person may operate a turbine powered aeroplane with a maximum certificated takeoff mass in excess of 5700 kg or authorised to carry more than 19 passengers, unless it is equipped with an ACAS II.

Forward Looking Wind Shear Warning System—Turbojet Aeroplanes.

7.7.1.8.—(*a*) [AOC] All turbojet aeroplanes of a maximum certificated takeoff mass in excess of 5700 kg or authorised to carry more than nine passengers should be equipped with a forward-looking wind shear warning system.

(*b*) [AOC] The system should be capable of providing the pilot with a timely aural and visual warning of wind shear ahead of the aircraft and the information required to permit the pilot to safely commence and continue a missed approach or go-around or to execute an escape manoeuvre if necessary.

(*c*) [AOC] The system should also provide an indication to the pilot when the limits specified for the certification of automatic landing equipment are being approached, when such equipment is in use.

7.8. FLIGHT RECORDERS

Flight Recorders System.

7.8.1.1.—(*a*) Crash protected flight recorders, for both aeroplanes and helicopters, comprise one or more of the following systems :

(1) A flight data recorder (FDR) ;

(2) A cockpit voice recorder (CVR) ;

(3) An airborne image recorder (AIR) ; and/or

(4) A data-link recorder (DLR).

Note : *Image and data link information may be recorded on either the CVR or the FDR.*

(*b*) Lightweight flight recorders for aeroplanes comprise one or more of the following systems :

(1) An aircraft data recording system (ADRS) ;

(2) A cockpit audio recording system (CARS) ;

(3) An airborne image recording system (AIRS) ; and/or

(4) A data link recording system (DLRS).

Note : *Image and data link information may be recorded on either the CARS or the ADRS.*

(c) Combination recorders (FDR/CVR) may be used to meet the equipage requirements for helicopters.

Construction and Installation.

7.8.1.2.—*(a)* Flight recorders systems shall be constructed, located and installed so as to provide maximum practical protection for the recordings in order that the recorded information may be preserved, recovered and transcribed.

(1) The flight recorder systems containers shall :

(i) Be painted a distinctive orange or yellow colour ;

(ii) Carry reflective material to facilitate their location ; and

(iii) Have securely attached an automatically activated underwater locating device.

(b) Flight recorder systems shall be installed so that :

(1) The probability of damage to the recordings is minimised ;

(2) They receive electrical power from a bus that provides the maximum reliability for operation of the flight recorder systems without jeopardising service to essential or emergency loads ;

(3) There is an aural or visual means for pre-flight checking that the flight recorder systems are operating properly ; and

(4) If the flight recorder systems have a bulk erasure device, the installation shall be designed to prevent operation of the device during flight time or crash impact.

(5) They meet the prescribed crashworthiness and fire protection specifications.

(c) The flight recorder systems, when tested by methods approved by the [appropriate certificating authority], shall be demonstrated to be suitable for the environmental extremes over which they are designed to operate.

(d) Means shall be provided for an accurate time correlation between the flight recorder systems recordings.

(e) The manufacturer shall provide the [appropriate certificating authority] with the following information in respect of the flight recording systems :

(1) manufacturer's operating instructions, equipment limitations and installation procedures ;

(2) manufacturer's test reports ; and

(3) for aeroplane flight recording systems, parameter origin or source and equations which relate counts to units of measurement ; and

Note 1: The term "appropriate certificating authority" refers to the State of Design.

Operation.

7.8.1.3—(*a*) Flight recorder systems shall not be switched off during flight time.

(b) To preserve flight recorder records, flight recorders shall be deactivated upon completion of flight time following an accident or incident. The flight recorders shall not be reactivated before their disposition as determined in accordance with the accident/incident regulations of Nigeria.

Note 1: The need for removal of the flight recorder records from the aircraft will be determined by the investigation authority in the State conducting the investigation with due regard to the seriousness of an occurrence and the circumstances, including the impact on the operation.
Note 2: The operator's responsibilities regarding the retention of flight recorder records are contained in the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations of Nigeria.

Continued Serviceability and Inspection of Flight Recorder Systems

7.8.1.4—*(a)* The operator shall conduct operational checks and evaluations of recordings from the flight recorder systems to ensure the continued serviceability of the recorders.

(b) The procedures for the inspections of the flight recorder systems are given in IS 7.8.1.4.

7.8.1.5—*(a)* Operators shall provide to [accident investigation authorities] the documentation of flight recording systems parameters in electronic format and in accordance with [industry specifications]. Flight Recorder Electronic Documentation.

7.8.1.6—*(a)* [AAC] No person may operate an aeroplane of a maximum certificated take-off mass over 5 700 required to be equipped with an FDR and a CVR unless it is equipped with— Combination Recorders

(1) An FDR and a CVR; or

(2) Two combination recorders (FDR/DVR).

(*b*) [AOC] No person may operate an aeroplane of a maximum certificated take-off mass of over 5 700 kg and which is required to be equipped with both a FDR and CVR unless—

(1) The aeroplane is equipped with an FDR and a CVR or alternatively equipped with two combination recorders (FDR/CVR).

(2) The aeroplane is equipped with two combination recorders (FDR/CVR) for aeroplanes type certificated on or after 1 January 2016.

Note: The requirement may be satisfied by equipping the aeroplanes with two combination recorders (one forward and one aft) or separate devices.

(c) [AOC] No person may operate an aeroplane of a maximum certificated take-off mass of over 15 000 kg which is required to be equipped with both a CVR and an FDR and type certificated on or after 1 January 2016, unless—

(1) The aeroplane is equipped with two combination recorders (FDR/CVR), and

(2) one recorder is located as close to the cockpit as practicable and the other recorder located as far aft as practicable.

(d) [AOC] No person may operate a multi-engined turbine-powered aeroplane of a maximum certificated take-off mass of 5 700 kg or less, unless –

(1) The aeroplane is equipped with an FDR and/or a CVR, or

(2) The aeroplane is equipped with one combination recorder (FDR/CVR).

7.8.2 Flight Data Recorders (FDR) and Aircraft Data Recording Systems (ADRS)

7.8.2.1—*(a)* Aeroplane. Aeroplane FDR shall record the parameters as listed in IS 7.8.2.1(A) for the following FDR types: Types and Parameters.

(1) Types I and IA FDR shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation.

(2) Types II and IIA FDRs shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices.

(b) Helicopter. Helicopter FDR shall record the parameters as listed in IS 7.8.2.1 (B) for the following FDR types:

(1) Type IV FDRs shall record the parameters required to determine accurately the helicopter flight path, speed, attitude, engine power and operation.

(2) Type IVA FDRs shall record the parameters required to determine accurately the helicopter flight path, speed, attitude, engine power, operations and configuration.

(3) Type V FDRs shall record the parameters required to determine accurately the helicopter flight path, speed, attitude and engine power.

Aircraft Equippage for Operation.

7.8.2.2—(*a*) No person may operate the following aeroplane unless it is equipped with a flight data recorder capable of recording the aural environment of the flight deck during flight time.

(1) [AAC] All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less for which the application is for a type certificate is first made to the appropriate CAA on or after 1 January 2016; shall be equipped with :

(i) a Type II FDR; or

(ii) a Class C AIR capable of recording flight path and speed parameters displayed to the pilot(s); or

(iii) an ADRS capable of recording the essential parameters defined in the Table in IS 7.8.2.2.

Note : *Type certificate first issued refers to the date of issuance of the original "Type Certificate" for the aeroplane type, not the date of certification of particular aeroplane variants or derivative models.*

(2) [AOC] All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less for which the individual certificate of airworthiness is first issued on or after 1 January 2016 shall be equipped with :

(i) a Type II FDR; or

(ii) a Class C AIR capable of recording flight path and speed parameters displayed to the pilot(s); or

(iii) an ADRS capable of recording the essential parameters defined in the Table in IS : 7.8.2.2.

(3) [AAC] All aeroplanes of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1989 shall be equipped with a Type I FDR.

(4) [AAC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, up to and including 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with a Type II FDR.

(5) [AOC] All multi-engined turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less for which the individual certificate of airworthiness is first issued on or after 1 January 1990 should be equipped with a Type IIA FDR.

(6) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, with a maximum certificated take-off mass of over 5 700 kg, except those in Regulations7.8.2.2 (a)(8), shall be equipped with an FDR which shall record time, altitude, airspeed, normal acceleration and heading.

(7) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, with a maximum certificated take-off mass of over 5 700 kg, except those in Regulations 7.8.2.2 (a)(8), , should be equipped with an FDR which shall record time, altitude, airspeed, normal acceleration, heading and such additional parameters as are necessary to determine pitch attitude, roll attitude, radio transmission keying and power on each engine.

(8) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, with a maximum certificated take-off mass of over 27 000 kg that are of types of which the prototype was certificated by the appropriate national authority after 30 September 1969 shall be equipped with a Type II FDR.

(9) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 5 700 kg shall be equipped with an FDR which shall record time, altitude, airspeed, normal acceleration and heading.

(10) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 27 000 kg that are of types of which the prototype was certificated by the appropriate national authority after 30 September 1969 should be equipped with an FDR which should record, in addition to time, altitude, airspeed, normal acceleration and heading, such additional parameters as are necessary to meet the objectives of determining:

(i) the attitude of the aeroplane in achieving its flight path ; and

(ii) the basic forces acting upon the aeroplane resulting in the achieved flight path and the origin of such basic forces.

(11) [AAC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued after 1 January 2005 shall be equipped with a Type IA FDR.

(12) [AOC] All aeroplanes which are required to record normal acceleration, lateral acceleration and longitudinal acceleration for which the application is for a type certificate is first made to the appropriate CAA on or after 1 January 2016 and which are required to be fitted with an FDR shall record those parameters at a maximum sampling and recording interval of 0.0625 seconds.

(13) [AAC] All aeroplanes which are required to record pilot input and/ or control surface position of primary controls (pitch, roll, yaw) for which the application for a type certificate is first made to the appropriate CAA on or after 1 January 2016 and which are required to be fitted with an FDR shall record those parameters at a maximum sampling and recording interval of 0.125 seconds.

Note : *For aeroplanes with control systems in which movement of a control surface will back drive the pilot's control, "or"applies. For aeroplanes with control systems in which movement of a control surface will not back drive the pilot's control, "and" applies. In aeroplanes with independent moveable surfaces, each surface needs to be recorded separately. In aeroplanes with independent pilot input on primary controls, each pilot input on primary controls needs to be recorded separately.*

(*b*) No person may operate the following helicopter unless it is equipped with a flight data recorder capable of recording the aural environment of the flight deck during flight time.

(1) [AAC] All helicopters with a maximum certificated take-off mass of over 3 180 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2016 shall be equipped with a Type IVA FDR.

(2) [AAC] All helicopter with a certificated takeoff mass of over 7 000 kg, or having a passenger seating configuration of more than nineteen, for which the individual certificate of airworthiness is first issued on or after 1, January 1989 shall be equipped with a Type IV FDR.

(3) [AAC] All helicopters with a maximum certificated take-off mass of over 3 180 kb, up to and including 7 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989 shall be equipped with a Type V FDR.

(4) [AOC] All turbine-engined helicopter of a maximum certificated take-off mass of over 2 250 kg, up to and including 3 180 kg for which the which the application for a type certificate is first made to the appropriate CAA on or after 1 January 2018, unless is it equipped with :

(i) A Type IVA FDR ; or

(ii) A Class C AIR capable of recording fight path and speed parameters displayed to the pilot(s) ; or

(iii) An ADRS capable of recording the essential parameters in the Table in IS: 7.8.2.2.

(5) [AOC] All turbine-engined helicopter of a maximum certificated take-off mass of over 3 180 kg or less for which the individual certificate of airworthiness is first issued on or after 1 January 2018, unless is it equipped with :

(i) A Type IVA FDR; or

(ii) A Class C AIR capable of recording fight path and speed parameters displayed to the pilot(s); or

(iii) An ADRS capable of recording the essential parameters in the Table in IS : 7.8.2.2.

7.8.2.3.—(*a*) Flight data recorder media not acceptable for use in aircraft registered in Nigeria, or operated in commercial air transport operations in Nigeria, are— Discontinuation.

(1) Engraving metal foil ;

(2) Photographic film ;

(3) Analogue data using frequency modulation (FM) ;

(4) Magnetic tape.

7.8.2.4—(a) FDRs shall be capable of retaining the information recorded during the last— Duration.

(1) Type I and II — 25 hours of operation.

(2) Type IIA – 30 minutes of operation.

(3) Type IV, IVA and V – 10 hours of operation.

7.8.3 Cockpit Voice Recorders (CVR) and Cockpit Audio Recording Systems (CARS)

7.8.3.1—(*a*) The CVR, and CARS as applicable to aeroplanes, shall start to record prior to the aircraft moving under its own power and record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power. Signals to be Recorded—CVR and CARs.

(*b*) In addition to *(a)* above, the CVR and CARS shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

(*c*) The CVR shall record on four separate channels, or more, at least the following :

(1) Voice communication transmitted from or received in the aircraft by radio ;

(2) Aural environment on the flight deck ;

(3) Voice communication of flight crew members on the flight deck using the aircraft's interphone system, if installed ;

(4) Digital communications with ATS, unless recorded by the FDR.

(*d*) The CARS shall record on two separate channels, or more, at least the following :

(1) Voice communication transmitted from or received in the aeroplane by radio ;

(2) Aural environment on the flight deck ; and

(3) Voice communication of flight crewmembers on the flight deck using the aeroplane's interphone, if installed.

(*e)* The recorder shall be capable of recording on at least four channels simultaneously, except for the recorder in paragraph 7.8.2.2(*a*)(4) in the preferred channel allocation as follows :

(1) Channel 1—co-pilot headphones and live boom microphone ;

(2) Channel 2—pilot headphones and live boom microphone ;

(3) Channel 3—area microphone ;

(4) Channel 4—time reference plus the third and fourth crewmembers.

(*f*) On a tape-based CVR, to ensure accurate time correlation between channels, the recorder shall record in an in-tine format. If a bi-directional configuration is used, the in-line format and channel allocation shall be retained in both directions.

Aircraft Equippage for Operations.

7.8.3.2—(a) No person may operate an aeroplane unless it is equipped with a cockpit voice recorder as listed below:

(1) [AAC] All turbine-engined aeroplanes for which the application for a type certificate is first submitted to the appropriate CAA on or after 1 January 2016 and required to be operated by more than one pilot shall be equipped with either a CVR or a CARS.

(2) [AAC] All aeroplanes of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1987 shall be equipped with a CVR.

(3) [AAC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, up to and including 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1987, should be equipped with a CVR.

(4) [AOC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2003, shall be equipped with a CVR capable of retaining the information recorded during at least the last two hours of its operation.

(5) [AOC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1987 shall be equipped with a CVR.

(6) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 27 000 kg that are of types of which the prototype was certificated by the appropriate national authority after 30 September 1969 shall be equipped with a CVR.

(7) [AOC] All turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 5 700 kg up to and including 27 000 kg that are of types of which the prototype was certificated by the appropriate national authority after 30 September 1969 should be equipped with a CVR.

(*b*) No person may operate a helicopter unless it is equipped with a cockpit voice recorder as listed below :

(1) [AAC] All helicopters of a maximum certificated take-off mass of over 7 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1987 shall be equipped with a CVR. For helicopters not equipped with an FDR, at least main rotor speed shall be recorded on the CVR.

(2) [AAC] All helicopters of a maximum certificated take-off mass of over 3 180 kg for which the individual certificate of worthiness is first issued on or after 1 January 1987 should be equipped with a CR. For helicopters not equipped with an FDR, at least main rotor speed shall be recorded on the CVR.

(3) [AAC] All helicopters of a maximum certificated take-off mass of over 7 000 kg for which the individual certificate of worthiness is first issued on or after 1 January 1987 should be equipped with a CR. For helicopters not equipped with an FDR, at least main rotor speed shall be recorded on the CVR.

Discontinuation.

7.8.3.3—(a) CVS media not acceptable for use in aircraft registered in Nigeria, or operated in commercial air transport operations in Nigeria, are—

(1) Magnetic tape and wire.

Duration.

7.8.3.4—(a) A CVR shall be capable of retaining the information recorded during at least the last—

(1) 30 minutes of its operation; or

(2) 2 hours, beginning no later than 1 January 2016.

Cockpit Voice Recorder Alternate Power.

7.8.3.5—(*a*) [AOC] No person may operate an aeroplane required to be equipped with a CVR unless it is equipped with CVR alternate power that :

(1) automatically engages and provides ten minutes, plus or minus one minute, of operation whenever aeroplane power to the recorder ceases, either by normal shutdown or by any other loss of power ;

(2) powers the CVR and its associated cockpit area microphone components ; and

(3) is located as close as practicable to the alternate power source.

(*b*) [AOC] No person may operate an aeroplane of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2018 unless is it equipped with an alternate power source, as described in (a) above, that powers—

(1) the forward CVR in the case of combination recorders, or

(2) at least one CVR.

Note 1 : *"Alternate" means separate from the power source that normally provides power to the CVR. The use of aeroplane batteries or other power sources is acceptable provided that the requirements are above are met and electrical power to essential and critical loads is not compromised.*

Note 2 – When the CVR function is combined with other recording functions within the same unit, powering the other functions is allowed.

7.8.4 Data link recorders (DLR) and Data Link recording Systems (DLRS)

Applicability

7.8.4.1—(*a*) No person may operate an aeroplane or helicopter for which the individual certificate of airworthiness is first issued on or after 1 January 2016, which utilise any of the data link communications applications listed in IS 7.8.4.1 and are required to carry a CVR, unless the aircraft records on a flight recorder the data link communications messages.

(*b*) No person may operate an aeroplane or helicopter modified on or after 1 January 2016, which utilise any of the data link communications applications listed in IS 7.8.4.1 and are required to carry a CVR, unless the aircraft records on a flight recorder the data link communications messages.

(*c*) No person may operate an aeroplane or helicopter where the aircraft flight path is authorised or controlled through the use of data link messages, unless all data link messages, both uplinks (to the aircraft) and downlinks from the aircraft) are recorded on the aircraft. As far as practicable, the time the messages were displayed to the flight crew and the time of the responses shall be recorded.

7.8.4.2.—(*a*) The minimum recording duration shall be equal to the duration of the CVR

Duration.

7.8.4.3.—(*a*) Data link recording shall be correlated to the recorded cockpit audio.

Correlation

7.8.5.—(*a*) Airborne image recorders are classified as follows :

Airborne Image Recorder (AIR) and Airborne Image Recording System (AIRS)

(1) A Class A AIR captures the general cockpit area in order to provide data supplemental to conventional flight recorders.

(2) A Class B AIR captures data link message displays.

(3) A Class C AIR captures instruments and control panels.

(*b*) When AIRs are used, the AIR must start to record prior to the aircraft moving under its own power and record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power. In addition, depending on the availability of electrical power, the AIR must start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

7.9. EMERGENCY, RESCUE, AND SURVIVAL EQUIPMENT

7.9.1.1.—(a) [AAC] Each item of emergency and flotation equipment shall be—

Emergency Equipment: All Aircraft.

(1) Readily accessible to the crew and, with regard to equipment located in the passenger compartment, to passengers without appreciable time for preparatory procedures ;

(2) Clearly identified and clearly marked to indicate its method of operation ;

(3) Marked as to date of last inspection ; and

(4) Marked as to contents when carried in a compartment or container.

7.9.1.2.—(*a*) No person shall operate an aeroplane without the following emergency exit equipment :

Emergency Exit Equipment - Passengers

(1) [AAC] Each passenger-carrying land plane emergency exit (other than over-the-wing) that is more than 6 feet from the ground with the aeroplane on the ground and the landing gear extended, shall have an approved means to assist the occupants in descending to the ground.

(2) [AAC] Each passenger emergency exit, its means of access, and its means of opening shall be conspicuously marked by a sign visible to occupants approaching along the main passenger aisle.

(3) [AAC] Each passenger-carrying aeroplane shall have an emergency lighting system, independent of the main lighting system that—

(i) Illuminates each passenger exit marking and locating sign ;

(ii) Provides enough general lighting in the passenger cabin ; and

(iii) [AOC] Includes floor proximity emergency escape path marking.

(4) [AAC] Each passenger emergency exit and the means of opening that exit from the outside shall be marked on the outside of the aeroplane.

(5) [AAC] Each passenger-carrying aeroplane shall be equipped with a slip-resistant escape route that meets the requirements under which that aeroplane was type certified.

(6) Each passenger-carrying aeroplane shall meet the detailed requirements contained in IS: 7.9.1.2.

(*b*) No person shall operate a helicopter certificated with a maximum take-off mass of 7 000 pounds or less and nine or less passenger seats without the following emergency exit equipment :

(1) Number and location.

(i) There must be at least one emergency exit on each side of the cabin readily accessible to each passenger. One of these exits must be usable in any probable attitude that may result from a crash.

(iii) Doors intended for normal use may also serve as emergency exits, provided that they meet the requirements of this section.

(iii) If emergency flotation devices are installed, there must be an emergency exit accessible to each passenger on each side of the cabin that is shown by test, demonstration, or analysis to—

(A) Be above the waterline; and

(B) Be open without interference from flotation devices, whether stowed or deployed.

(2) Type and operation. Each emergency exit prescribed by paragraph :

(a) of this section must—

(i) Consist of a movable window or panel, or additional external door, providing an unobstructed opening that will admit a 19-by 26-inch ellipse;

(ii) Have simple and obvious methods of opening, from the inside and from the outside, which do not require exceptional effort;

(iii) Be arranged and marked so as to be readily located and opened even in darkness; and

(iv) Be reasonably protected from jamming by fuselage deformation.

(3) Ditching emergency exits for passengers. If certification with ditching provisions is requested, the markings required by (1)(iii) of this paragraph must be designed to remain visible if the rotorcraft is capsized and the cabin is submerged.

(c) No person shall operate a helicopter certificated with a maximum take-off mass of more than 20 000 pounds and ten or more passenger seats without the following emergency exit equipment :

(1) Passenger emergency exits and openings. Openings with dimensions larger than those specified below may be used, regardless of shape, if the base of the opening has a flat surface of not less than the specified width. For the purpose of this part, the types of passenger emergency exit shall be as follows :

(i) Type I. This type shall have a rectangular opening of not less than 24 inches wide by 48 inches high, with corner radii not greater than one-third the width of the exit, in the passenger area in the side of the fuselage at floor level and as far away as practicable from areas that might become potential fire hazards in a crash.

(ii) Type II. This type is the same as Type I, except that the opening shall be at least 20 inches wide by 44 inches high.

(iii) Type III. This type is the same as Type I, except that—

(A) The opening shall be at least 20 inches wide by 36 inches high ; and

(B) The exits need not be at floor level.

(iv) Type IV. This type shall have a rectangular opening of not less than 19 inches wide by 26 inches high, with corner radii not greater than one-third the width of the exit, in the side of the fuselage with a step-up inside the rotorcraft of not more than 29 inches.

(2) Passenger emergency exits; side-of-fuselage. Emergency exits shall be accessible to the passengers and, except as provided in (c)(4) of this paragraph, must be provided in accordance with the following table: Emer gency exits for each side of the fuselage

Passenger seating capacity	*Emergency exits for each side of the fuselage*			
	Type I	*Type II*	*Type III*	*Type IV*
1 through 10				1
11 through 19			1 or	2
20 through 39		1		1
40 through 59	1			1
60 through 79	1		1 or	2

(3) Passenger emergency exits ; other than side-of-fuselage. In addition to the requirements of item (2) of this paragraph—

(i) There shall be enough openings in the top, bottom, or ends of the fuselage to allow evacuation with the rotorcraft on its side ; or

(ii) The probability of the rotorcraft coming to rest on its side in a crash landing must be extremely remote.

(4) *Ditching emergency exits for passengers*.—If the helicopter was certificated with ditching provisions, ditching emergency exits shall be provided in accordance with the following :

(i) For rotorcraft that have a passenger seating configuration, excluding pilots seats, of nine seats or less, one exit above the waterline in each side of the rotorcraft, meeting at least the dimensions of a Type IV exit.

(ii) For rotorcraft that have a passenger seating configuration, excluding pilots seats, of 10 seats or more, one exit above the waterline in a side of the rotorcraft meeting at least the dimensions of a Type III exit, for each unit (or part of a unit) of 35 passenger seats, but no less than two such exits in the passenger cabin, with one on each side of the rotorcraft. However, where it has been shown through analysis, ditching demonstrations, or any other tests found necessary, that the evacuation capability of the rotorcraft during ditching is improved by the use of larger exits, or by other means, the passenger seat to exit ratio may be increased.

(iii) Flotation devices, whether stowed or deployed, may not interfere with or obstruct the exits.

(5) *Ramp Exits*.—One Type I exit only, or one Type II exit only, that is required in the side of the fuselage under paragraph (*b*) of this section, may be installed instead in the ramp of floor ramp rotorcraft if—

(i) Its installation in the side of the fuselage is impractical ; and

(ii) Its installation in the ramp meets emergency exit access requirements in paragraph (*g*) below.

(*d*) Emergency exit arrangement :

(1) Each emergency exit shall consist of a movable door or hatch in the external walls of the fuselage and must provide an unobstructed opening to the outside.

(2) Each emergency exit shall be openable from the inside and from the outside.

(3) The means of opening each emergency exit shall be simple and obvious and may not require exceptional effort.

(4) There shall be means for locking each emergency exit and for preventing opening in flight inadvertently or as a result of mechanical failure.

(5) There shall be means to minimise the probability of the jamming of any emergency exit in a minor crash landing as a result of fuselage deformation under the ultimate inertial forces—

(i) Upward – 1.5g ;

(ii) Forward – 4.0g ;

(iii) Sideward – 2.0g ;

(iv) Downward – 4.0g.

(6) Except as provided in item (8) of this paragraph, each land-based rotorcraft emergency exit must have an approved slide as stated in paragraph (*g*) of this subsection, or its equivalent, to assist occupants in descending to the ground from each floor level exit and an approved rope, or its equivalent, for all other exits, if the exit threshold is more than 6 feet above the ground—

(i) With the rotorcraft on the ground and with the landing gear extended ;

(ii) With one or more legs or part of the landing gear collapsed, broken, or not extended ; and

(iii) With the rotorcraft resting on its side, provided this was accomplished during the emergency evacuation test during type certification of the helicopter.

(7) The slide for each passenger emergency exit shall be a self-supporting slide or equivalent, and shall be designed to meet the following requirements:

(i) It shall be automatically deployed, and deployment shall begin during the interval between the time the exit opening means is actuated from inside the rotorcraft and the time the exit is fully opened. However, each passenger emergency exit which is also a passenger entrance door or a service door shall be provided with means to prevent deployment of the slide when the exit is opened from either the inside or the outside under non-emergency conditions for normal use.

(ii) It shall be automatically erected within 10 seconds after deployment is begun.

(iii) It shall be of such length after full deployment that the lower end is self-supporting on the ground and provides safe evacuation of occupants to the ground after collapse of one or more legs or part of the landing gear.

(iv) It shall have the capability, in 25-knot winds directed from the most critical angle, to deploy and, with the assistance of only one person, to remain usable after full deployment to evacuate occupants safely to the ground.

(v) For helicopters having 30 or fewer passenger seats and having an exit threshold more than 6 feet above the ground, a rope or other assist means may be used in place of the slide specified in item (6) of this paragraph, provided this was accomplished during the emergency evacuation test during type certification of the helicopter.

(8) If a rope, with its attachment, is used for compliance with items (6), (7), or (8) of this paragraph, it shall—

(i) Withstand a 400-pound static load ; and

(ii) Attach to the fuselage structure at or above the top of the emergency exit opening, or at another approved location if the stowed rope would reduce the pilot's view in flight.

(e) Emergency exit marking.

(1) Each passenger emergency exit, its means of access, and its means of opening shall be conspicuously marked for the guidance of occupants using the exits in daylight or in the dark. Such markings shall be designed to remain visible for rotorcraft equipped for overwater flights if the rotorcraft is capsized and the cabin is submerged.

(2) The identity and location of each passenger emergency exit shall be recognisable from a distance equal to the width of the cabin.

(3) The location of each passenger emergency exit shall be indicated by a sign visible to occupants approaching along the main passenger aisle. There shall be a locating sign—

(i) Next to or above the aisle near each floor emergency exit, except that one sign may serve two exits if both exists can be seen readily from that sign ; and

(ii) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible the sign may be placed at another appropriate location.

(4) Each passenger emergency exit marking and each locating sign shall have white letters 1 inch high on a red background 2 inches high, be self or electrically illuminated, and have a minimum luminescence (brightness) of at least 160 micro lamberts. The colors may be reversed if this will increase the emergency illumination of the passenger compartment.

(5) The location of each passenger emergency exit operating handle and instructions for opening shall be shown—

(i) For each emergency exit, by a marking on or near the exit that is readable from a distance of 30 inches ; and

(ii) For each Type I or Type II emergency exit with a locking mechanism released by rotary motion of the handle, by—

(A) A red arrow, with a shaft at least three-fourths inch wide and a head twice the width of the shaft, extending along at least 70 degrees of arc at a radius approximately equal to three-fourths of the handle length ; and

(B) The word "open" in red letters 1 inch high, placed horizontally near the head of the arrow.

(6) Each emergency exit, and its means of opening, shall be marked on the outside of the rotorcraft. In addition, the following apply—

(i) There shall be a 2-inch colored band outlining each passenger emergency exit, except small rotorcraft with a maximum weight of 12,500 pounds or less may have a 2-inch colored band outlining each exit release lever or device of passenger emergency exits which are normally used doors.

(ii) Each outside marking, including the band, shall have color contrast to be readily distinguishable from the surrounding fuselage surface. The contrast shall be such that, if the reflectance of the darker color is 15 percent or less, the reflectance of the lighter color must be at least 45 percent. "Reflectance" is the ratio of the luminous flux reflected by a body to the luminous flux it receives. When the reflectance of the darker color is greater than 15 percent, at least a 30 percent difference between its reflectance and the reflectance of the lighter color must be provided.

(*f*) Emergency lighting. The following apply :

(1) A source of light with its power supply independent of the main lighting system shall be installed to—

(i) Illuminate each passenger emergency exit marking and locating sign ; and

(ii) Provide enough general lighting in the passenger cabin so that the average illumination, when measured at 40-inch intervals at seat armrest height on the center line of the main passenger aisle, is at least 0.05 foot- candle.

(2) Exterior emergency lighting shall be provided at each emergency exit. The illumination may not be less than 0.05 foot-candle (measured normal to the direction of incident light) for minimum width on the ground surface, with landing gear extended, equal to the width of the emergency exit where an evacuee is likely to make first contact with the ground outside the cabin.

The exterior emergency lighting may be provided by either interior or exterior sources with light intensity measurements made with the emergency exits open.

(3) Each light required by item (1) or (2) of this paragraph shall be operable manually from the cockpit station and from a point in the passenger compartment that is readily accessible. The cockpit control device must have an "on," "off," and "armed" position so that when turned on at the cockpit or passenger compartment station or when armed at the cockpit station, the emergency lights will either illuminate or remain illuminated upon interruption of the rotorcraft's normal electric power.

(4) Any means required to assist the occupants in descending to the ground shall be illuminated so that the erected assist means is visible from the rotorcraft.

(i) The assist means must be provided with an illumination of not less than 0.03 foot-candle (measured normal to the direction of the incident light) at the ground end of the erected assist means where an evacuee using the established escape route would normally make first contact with the ground, with the rotorcraft in each of the attitudes corresponding to the collapse of one or more legs of the landing gear.

(ii) If the emergency lighting subsystem illuminating the assist means is independent of the rotorcraft's main emergency lighting system, it—

(A) Will automatically be activated when the assist means is erected;

(B) Will provide the illumination required by (4)(i) above ; and

(C) Will not be adversely affected by stowage.

(5) The energy supply to each emergency lighting unit shall provide the required level of illumination for at least 10 minutes at the critical ambient conditions after an emergency landing.

(6) If storage batteries are used as the energy supply for the emergency lighting system, they may be recharged from the rotorcraft's main electrical power system provided the charging circuit is designed to preclude inadvertent battery discharge into charging circuit faults.

(g) Emergency exit access.

(1) Each passageway between passenger compartments, and each passageway leading to Type I and Type II emergency exits, shall be—

(i) Unobstructed ; and

(ii) At least 20 inches wide.

(2) For each emergency exit covered by (*d*)(6) in this paragraph, there shall be enough space adjacent to that exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required for that exit.

(3) There shall be access from each aisle to each Type III and Type IV exit, and

(i) For rotorcraft that have a passenger seating configuration, excluding pilot seats, of 20 or more, the projected opening of the exit provided shall not be obstructed by seats, berths, or other protrusions (including seatbacks in any position) for a distance from that exit of not less than the width of the narrowest passenger seat installed on the rotorcraft ;

(ii) For rotorcraft that have a passenger seating configuration, excluding pilot seats, of 19 or less, there may be minor obstructions in the region described in (*g*)(3) (*i*) of this paragraph, if there are compensating factors to maintain the effectiveness of the exit.

(h) Main aisle width. The main passenger aisle width between seats must equal or exceed the values in the following table:

Passenger Seating Capacity	*Minimum main passenger aisle width*	
	Less than 25 inches from the floor (inches)	*25inches and more from the floor (inches)*
10 or less	12	15
11 through 19	12	20
20 or more	15	20

Note: A narrower width not less than 9 inches may be approved when substantiated by tests found necessary by the State of Manufacturer.

7.9.1.3.—(*a*) [AAC] No person may operate an aircraft over water or across land areas which have been designated by the Authority as areas in which search devices as may be appropriate to the area overflown, to include— Visual Signalling Devices.

(1) At least one pyrotechnic signaling device for each life raft required for overwater operations ; and

(2) Any other requirements specified by the Authority.

7.9.1.4—(*a*) [AAC] No person may operate an aircraft across land areas which have been designated by Nigeria as areas in which search and rescue would be especially difficult, unless equipped with enough survival kits for the number of occupants of the aircraft appropriate for the route to be flown. Survival Kits.

(*b*) Helicopters, when operating over sea areas which have been designated by the State concerned as areas in which search and rescue would be especially difficult, shall be equipped with life-saving equipment (including means of sustaining life) as may be appropriate to the area overflown.

7.9.1.5 (*a*) No person shall operate an aeroplane without the following emergency locator equipment : Emergency Locator Transmitter.

(1) [AAC] All aeroplanes on all flights shall be equipped with an automatically activated ELT that transmits simultaneously on both 406 MHz and 121.5 MHz, and meets the technical standards specified by the Authority and the relevant portions of ICAO *Annex* 10, Volume 3.

(2) (AAC) All aeroplanes authorised to carry more than 19 passengers shall be equipped with at least one automatic ELT or two ELTs of any type.

(3) (AAC) All aeroplanes authorised to carry more than 19 passengers for which the individual certificate of airworthiness is first issued after 1st July, 2008 shall be equipped with at least two ELTs, one of which shall be automatic.

(4) [AOC] No person may operate an aeroplane in long-range overwater operations or over designated land areas where search and rescue would be especially difficult, without having on the aeroplane at least two ELTs, one of which shall be automatic.

(5) [AOC] At least one survival type ELT shall be located with each life-raft carried.

(*b*) No person shall operate a helicopter without the following emergency locator equipment :

(1) [AAC] All helicopters on all flights shall be equipped with an automatically activated ELT that transmit simultaneously on both 406 MHz and 121.5, and meet the technical standards specified by the Authority and the relevant portions of ICAO *Annex* 10,
Volume 3.

(2) [AAC] All helicopters operating on flights over water or a hostile environment, designated as a land area where search and rescue would be especially difficult shall be equipped with at least one automatic ELT and one ELT(s) in each life raft carried on board.
(*See* Regulations 7.9.1.18).

Note 1 : *When operating in a hostile environment, a safe ditching requires a helicopter to be designed for landing on water or certificated in accordance with ditching provisions.*

Note 2 : *The judicious choice of number of ELTs, their type and placement on aircraft and associated floatable life support systems will ensure the greatest chance of ELT activation in the event of an accident for aircraft operating over water or land including areas especially difficult for search and rescue. Placement of transmitter units is a vital factor in ensuring optimal crash and fire protection. The placement of the control and switching devices (activation monitors of automatic fixed ELTs and their associated operational procedures will also take into consideration the need for rapid detection of inadvertent activation and convenient manual switching by crew members.*

(*c*) [AAC] Batteries used in ELTs shall be replaced (or recharged if the battery is rechargeable) and marked when—

(1) The transmitter has been in use for more than one cumulative hour ; or

(2) 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired.

(3) The date for a replacement of the battery in the ELT shall be legibly marked on the outside of the transmitter.

Portable Fire Extinguishers.

7.9.1.6—(*a*) [AAC] No person may operate an aircraft unless it is equipped with portable fire extinguishers of a type which, when discharged, will not cause dangerous contamination of the air within the aircraft. At least one shall be located in—

(1) The pilot's compartment ; and

(2) Each passenger compartment that is separate from the pilot's compartment and not readily accessible to the flight crew.

(*b*) [AOC] No person may operate an aircraft unless it is equipped with portable fire extinguishers accessible for use in crew, passenger, and cargo compartments as follows :

(1) The type and quantity of extinguishing agent shall be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used.

(2) At least one portable fire extinguisher shall be provided and conveniently located for use in each Class E cargo compartment which is accessible to crew members during flight, and at least one shall be located in each upper and lower lobe galley.

Lavatory Fire Extinguisher.

(3) At least one portable fire extinguisher shall be conveniently located on the flight deck for use by the flight crew.

(4) At least one portable fire extinguisher shall be conveniently located in the passenger compartment if the passenger compartment is separate from the flight deck and not readily accessible to the flight crew.

(5) For each aeroplane having a passenger seating capacity of more than 30, there shall be at least the following number of portable fire extinguishers conveniently located and uniformly distributed throughout the compartment.

Minimum Number of Hand Fire Extinguishers Passenger Seating Capacity	
7 through 29	1
30 through 60	2
61 through 200	3
201 through 300	4
301 through 400	5
401 through 500	6
501 through 600	7
601 or more	8

(*c*) [AAC] Any agent used in a portable fire extinguisher in an aircraft for which the individual certificate of airworthiness is first issued on or after 31st December, 2011, and any extinguishing agent used in a portable fire extinguisher in an aircraft for which the individual certificate of airworthiness is first issued on or after 31st December, 2016, shall :

(1) Meet the applicable minimum performance requirements of the Authority ; and

(2) Not contain Halon 1211, Halon 1301, or Halon 2402.

Lavaratory Fire Extinguisher.

7.9.1.7.—(*a*)[AAC] No person may operate an aircraft unless each lavatory in the aircraft is equipped with a built-in fire extinguisher for each disposal receptacle for towels, paper, or waste located within the lavatory.

(*b*) [AAC] Built-in lavatory fire extinguishers shall be designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle.

(*c*) [AAC] Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels, or waste in an aircraft for which the individual certificate of airworthiness is first issued on or after 31st December, 2011 shall :

(1) Meet the applicable minimum performance requirements of the Authority ; and

(2) Not contain Halon 1211, Halon 1301, or Halon 2402.

Lavatory Smoke Detector.

7.9.1.8.—(*a*) [AOC] No person may operate a passenger-carrying transport category aeroplane unless each lavatory in the aeroplane is equipped with a smoke detector system or equivalent that provides—

(1) A warning light in the cockpit ; or

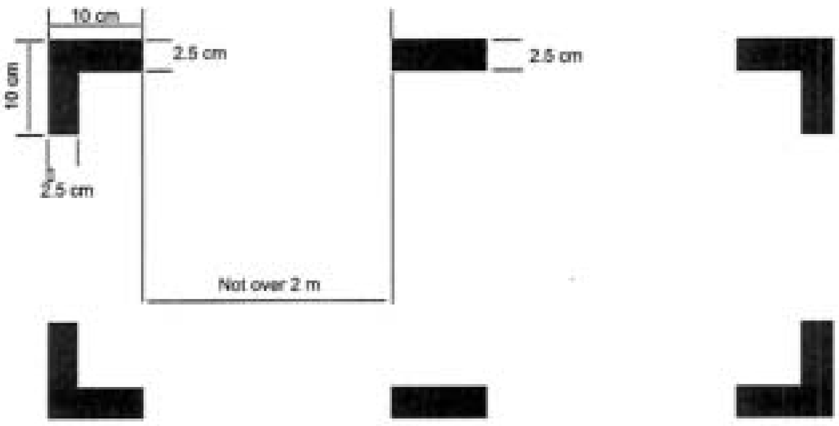
(2) A warning light or audio warning in the passenger cabin which would be readily detected by a cabin crew member, taking into consideration the positioning of cabin crew members throughout the passenger compartment during various phases of flight.

Crash Axe.

7.9.1.9—*(a)* [AAC] No person shall operate an aeroplane certificated with a take-off mass of 5 700 kg or more unless it is equipped with a crash axe appropriate for effective use in that type of aeroplane, stored in a place not visible to passengers on the aeroplane.

Marking of Break-in Points.

7.9.1.10—(*a*)[AAC] If areas of the fuselage suitable for break-in by rescue crews in an emergency are marked on an aircraft, such areas shall be marked as shown below, and the colour of the markings shall be red or yellow and, if necessary, they shall be outlined in white to contrast with the background.



(*b*) If the corner markings are more than 2 m apart, intermediate lines 9 cm x 3 cm shall be inserted so that there is no more than 2 m between adjacent markings.

7.9.1.11—(*a*) First Aid Kits.

First-Aid Kit and Universal Precaution Kit

(1) No person may operate aircraft unless it is it is equipped with an accessible, approved first-aid kit(s) :

(2) The contents of first-aid kits to be carried shall comply with Implementing Standard : IS: 7. 9.1.11

(3) Each aircraft shall carry first-aid kits in accordance with at least the following schedule :

Number of Passenger Seats	*Number of First-Aid Kits*
0-100	1
101-200	2
201-300	3
301-400	4
401-500	5
More than 500	6

(4) The location of first aid kits should be :

(i) Distributed evenly throughout the aircraft ;

(ii) Readily accessible to cabin crew members, if cabin crew members are required for flight ; and

(iii) Located near the aircraft exits should their use be required outside the aircraft in an emergency situation.

(*b*) Universal Precaution Kit.

(1) No person shall operate an aircraft that requires a cabin crew member unless it is equipped with at least one universal precaution kit.

(2) The contents of universal precaution kits to be carried shall comply with Implementing Standard : IS : 7. 9.1.11.

(3) Each aircraft authorized to carry more than 250 passengers shall carry universal precaution kits in accordance with the following:

(i) Two kits ; and

(ii) Additional kits, as determined by the Authority, at times of increased public health risk, such as during an outbreak of a serious communicable disease having pandemic potential.

Emergency Medical Kit— Aeroplanes.

7.9.1.12.—(*a*) [AOC] No person may operate a passenger flight in an aeroplane authorized to carry more than 100 passengers, on a sector length of more than two hours unless the aeroplane is equipped with an approved emergency medical kit for the use of medical doctors or other qualified persons in treating in-flight medical emergencies that might occur during flight time.

(*b*) [AOC] The contents of emergency medical kits to be carried shall comply with Implementing Standard: IS: 7. 9.1.12.

(*c*) [AOC] The medical kit shall be stored in a secure location.

Oxygen Storage and Dispensing Apparatus.

7.9.1.13.—(*a*) [AAC] All aircraft intended to be operated at altitudes requiring the use of supplemental oxygen shall be equipped with adequate oxygen storage and dispensing apparatus.

(*b*) [AAC] The oxygen apparatus, the minimum rate of oxygen flow, and the supply of oxygen shall meet applicable airworthiness standards for type certification in the transport category as specified by the Authority.

(*c*) [AAC] No person may operate an aircraft at altitudes above 10,000 feet unless it is equipped with oxygen masks, located so as to be within the immediate reach of flightcrew members while at their assigned duty station.

(*d*) [AAC] No person may operate a pressurised aeroplane at altitudes above 25,000 feet unless:

(1) Flightcrew member oxygen masks are available at the flight duty station and are of a quick donning type ;

(2) Sufficient spare outlets and masks and/or sufficient portable oxygen units with masks are distributed evenly throughout the cabin to ensure immediate availability of oxygen to each required cabin crew member regardless of his location at the time of cabin pressurisation failure.

(*e*) [AAC] An oxygen-dispensing unit connected to oxygen supply terminals is installed so as to be immediately available to each occupant, wherever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10%. The extra units are to be evenly distributed throughout the cabin.

(*f*) [AAC] The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures established for each operation in the Operations Manual and with the routes to be flown, and with the emergency procedures specified in the Operations Manual. *See* Implementing Standard : IS : 7.9.1.13 to determine the amount of supplemental oxygen needed for non-pressurised and pressurised aircraft.

(*g*) [AAC] Aircraft intended to be operated at pressure altitudes above 25 000 ft or which, if operated at or below 25 000 ft, cannot descend safely within four minutes to 13 000 ft, and for which the individual certificate of airworthiness was first issued on or after 9 November 1998, shall be provided with automatically deployable oxygen equipment immediately available to each occupant, wherever seated. The total number dispensing units and outlets shall exceed the number of seats by at least 10 percent. The extra units shall be evenly distributed throughout the cabin.

Protective Breathing Equipment.

7.9.1.14—(a) [AOC] No AOC holder may operate an aeroplane with a maximum certified takeoff mass exceeding 5700 kg. or having a maximum approved seating configuration of more than 19 seats unless—

(1) It has PBE to protect the eyes, nose and mouth of each flight crew member while on flight deck duty and to provide oxygen for a period of not less than 15 minutes ; and

(2) It has sufficient portable PBE to protect the eyes, nose and mouth of all required cabin crew members and to provide breathing gas for a period of not less than 15 minutes.

(*b*) [AOC] The oxygen supply for PBE may be provided by the required supplemental oxygen system.

(*c*) [AOC] The PBE intended for flight crew use shall be conveniently located on the flight deck and be easily accessible for immediate use by each required flight crew member at their assigned duty station.

(*d*) [AOC] The PBE intended for cabin crew use shall be installed adjacent to each required cabin crew member duty station.

(*e*) [AOC] Easily accessible portable PBE shall be provided and located at or adjacent to the required hand fire extinguishers except that, where the fire extinguisher is located inside a cargo compartment, the PBE shall be stowed outside but adjacent to the entrance to that compartment.

(*f*) [AOC] The PBE while in use shall not prevent required communication.

First Aid Oxygen Dispensing Units.

7.9.1.15—(*a*) [AOC] No AOC holder may conduct a passenger carrying operation in a pressurised aeroplane at altitudes above 25,000 feet, when a cabin crew member is required to be carried, unless it is equipped with—

(1) Undiluted first-aid oxygen for passengers who, for physiological reasons, may require oxygen following a cabin depressurisation ; and

(2) A sufficient number of dispensing units, but in no case less than two, with a means for cabin crew to use the supply.

(b) [AOC] The amount of first-aid oxygen required in paragraph (a) for a particular operation and route shall be determined on the basis of—

(1) Flight duration after cabin depressurisation at cabin altitudes of more than 8,000 feet ;

(2) An average flow rate of at least 3 litres Standard Temperature Pressure Dry (STPD)/minute/person ; and

(3) At least 2% of the passengers carried, but in no case for less than one person.

(*c*) The amount of first-aid oxygen required for a particular operation shall be determined on the basis of cabin pressure altitudes and flight duration, consistent with the operating procedures established for each operation and route.

(*d*) The oxygen equipment provided shall be capable of generating a mass flow to each user of at least four litres per minute, STPD. Means may be provided to decrease the flow to not less than two litres per minutes, STPD, at any altitude.

Megaphones.

7.9.1.16.—(*a*) [AOC] Each person operating a passenger-carrying aeroplane shall have a portable battery-powered megaphone or megaphones readily accessible to the crew members assigned to direct emergency evacuation.

(*b*) [AOC] The number and location of megaphones required in paragraph (*a*) shall be determined as follows :

(1) On aeroplanes with a seating capacity of more than 60 and less than 100 passengers, one megaphone shall be located at the most rearward location in the passenger cabin where it would be readily accessible to a normal cabin crew member seat ; and

(2) On aeroplanes with a seating capacity of more than 99 passengers, two megaphones in the passenger cabin on each aeroplane one installed at the forward end and the other at the most rearward location where it would be readily accessible to a normal cabin crew member seat.

(3) For aeroplanes with more than one passenger deck, in all cases when the total passenger seating configuration of a deck is more than 60, at least one megaphone is required on the deck.

Individual Flotation Devices.

7.9.1.17—(*a*) Landplanes.

(1) [AAC] Landplanes shall carry the equipment prescribed in paragraph 2 :

(i) When flying en-route over water beyond gliding distance from the shore ;

(ii) When flying over water at a distance of more than 93 km (50 NM) away from the shore for aircraft capable of maintaining safe altitude after the failure of one engine for two-engine aircraft and the failure of two engines for three or four-engine aircraft ; or

(iii) When taking off or landing at an aerodrome where the (Authority) has determined the take off or approach path is so disposed over water that in the event of a mishap there would be the likelihood of a ditching.

(2) [AAC] One life-jacket or equivalent flotation device equipped with a means of electric illumination shall be carried for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.

(*b*) Seaplanes.

(1) [AAC] For all flights, seaplanes shall be equipped with the equipment prescribed in paragraph 2.

(*c*) Helicopters.

(1) [AAC] Helicopters operating in performance Class 1 or 2 and operating in accordance with the provisions of 4.5.1 shall be equipped with one life jacket, or equivalent individual flotation device, for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided. For offshore operations the life jacket shall be worn constantly unless the occupant is wearing an integrated survival suit that includes the functionality of the life jacket.

(2) Helicopters operating in performance Class 3 when operating beyond autorotational distance from land but within a distance from land specified by the appropriate authority of the responsible State shall be equipped with one life jacket, or equivalent individual flotation device, for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.

(3) For offshore operations, when operating beyond autorotational distance from land, the life jacket shall be worn unless the occupant is wearing an integrated survival suit that includes the functionality of the life jacket**.**

(4) Helicopters operating in performance Class 3 when operating beyond the distance specified in Nig. CARs 7.9.1.17(*c*)(2) shall be equipped as in Nig. CARs 7.9.1.17*(c*)(1)

(5) In the case of helicopters operating in performance Class 2 or 3, when taking off or landing at a heliport where, in the opinion of the State of the Operator, the take-off or approach path is so disposed over water that in the event of a mishap there would be likelihood of a ditching, at least the equipment required in 7.9.1.17(*c*)(1) shall be carried.

(6) Each life jacket and equivalent individual flotation device, when carried in accordance with 7.9.1.19, shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(7) In the case of helicopters operating in performance Class 2 or 3, when taking off or landing at a heliport where, in the opinion of the State of the Operator, the take-off or approach path is so disposed over water that in the event of a mishap there would be likelihood of a ditching, at least the equipment required in 7.9.1.17(*c*)(1).

Life Rafts.

7.9.1.18—(*a*) [AAC] In addition to the equipment prescribed in 7. 9.1.17 and 7. 9.1.19 of this Part, life saving rafts in sufficient numbers to carry all persons on board shall be installed in :

(1) Aeroplanes operated on long range over-water flights, and

(2) All other aeroplanes when they are operated over water away from land suitable for making an emergency landing at a distance of more than 185 km (100 NM) in the case of single-engine aeroplanes, and more than 370 km (200 NM) in the case of multi-engine aeroplanes capable of continuing flight with one engine inoperative.

(3) Class 1 and 2 helicopters when they are operated over water at a distance from land corresponding to more than 10 minutes at normal cruise speed.

(4) Class 3 helicopters when they are operated over water beyond autorotational or safe forced landing distance from land.

(*b*) [AOC] An aircraft shall have life saving rafts with a sufficient capacity to carry all persons on board in the event of the loss of one raft of the largest capacity.

(*c*) All life saving rafts shall be stowed so as to facilitate their ready use in an emergency.

(*d*) Life rafts shall be equipped with the following life sustaining equipment—

(1) A electric survivor locator light ;

(2) A survival kit ;

(3) A pyrotechnic signaling device ; and

(4) An ELT (See 7.9.1.5).

(*e*) [AAC] In helicopters, life rafts which are not deployable by remote control and which have a mass of more than 40 kg shall be equipped with a means of mechanically assisted deployment.

(*f*) [AAC] At the earliest practicable date but not later than 1 January 2018, on all aeroplanes of a maximum certificated take-off mass of over 27 000 kg, a securely attached underwater locating device operating at a frequency of 8.8 kHz. This automatically activated underwater locating device shall operate for a minimum of 30 days and shall not be installed in wings or empennage.

7.9.1.19.—*(a)* [AAC] All helicopters flying over water at a distance from land corresponding to more than 10 minutes at normal cruise speed in the case of performance Class 1 or 2 helicopters, or flying over water beyond auto-rotational or safe forced landing distance from land in the case of performance Class 3 helicopters, shall be fitted with a permanent or rapidly deployable means of floatation so as to ensure a safe ditching of the helicopter.

Flotation Device for Helicopter Ditching.

7.10. MISCELLANEOUS SYSTEMS AND EQUIPMENT

7.10.1.1.—(*a*) [AAC] Each aircraft used in passenger carrying operations shall be equipped with the following seats, safety belts, and shoulder harnesses that meet the airworthiness requirements for type certification of that aircraft :

Seats, Safety Belts, and Shoulder Harnesses.

(1) A seat with safety belt for each person on board over an age of two (2) years ; and a restraining belt for each berth on board the aircraft ;

(2) A safety harness for each flight crewmember seat.

(i) The safety harness for each pilot seat shall incorporate a device, which will automatically restrain the occupant's torso in the event of rapid deceleration.

(ii) The safety harness for each pilot seat, which includes shoulder straps and a seat belt, should incorporate a restraining device to prevent a suddenly incapacitated pilot from interfering with the flight controls.

(3) A forward or rearward facing (within 15 degrees of the longitudinal axis of the aircraft) seat equipped with a safety harness for each cabin crew member station in the passenger compartment.

(4) The cabin crew member's seats shall be located near floor level and other emergency exits as required by the Authority for emergency evacuation.

7.10.1.2.—(*a*) [AOC] Pilot compartment door —

Passenger and Pilot Compartment Doors – Aeroplanes.

(1) No person may operate a passenger carrying aeroplane of a maximum certificated takeoff mass in excess of 45 500 kg or with a passenger seating capacity greater than 60 unless that aircraft is equipped with an approved

flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons.

(2) No person may operate a passenger carrying aeroplane having a certificated takeoff mass of less than 45 500 kg or with a passenger seating capacity of less than 60 unless that aircraft is equipped with an approved flight crew compartment door, where practicable, that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons.

(3) Each pilot compartment door shall be capable of being locked and unlocked from either pilot's station.

(4) A means shall be provided for monitoring from either pilot station the entire door area outside the pilot compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

(*b*) [AOC] Passenger compartment doors—

(1) Each passenger compartment door shall have :

(i) A means for the crew, in an emergency, to unlock each door that leads to a compartment that is normally accessible to passengers and that can be locked by passengers ;

(ii) A placard on each door used to access a required passenger emergency exit, indicating that such door shall be open during takeoff and landing; and

(iii) A means readily available for each crewmember to unlock any door that separates a passenger compartment from another compartment that has emergency exit provisions.

Passenger Information Signs.

7.10.1.3.—(*a*) [AOC] No person shall operate a passenger carrying aeroplane with a maximum certificated take-off weight of 5,700 kg (12,500lbs) or more unless it is equipped with—

(1) At least one passenger information sign (using either letters or symbols) notifying when smoking is prohibited and one sign (using either letters or symbols) notifying when safety belts should be fastened, which shall, when illuminated, be legible to each person seated in the passenger cabin under all probable conditions of cabin illumination ;

(2) Signs which notify when safety belts should be fastened and when smoking is prohibited shall be so constructed that the crew can turn them on and off ;

(3) A sign or placard affixed to each forward bulkhead and each passenger seat back that reads "Fasten Seat Belt While Seated."

(b) [AAC] Notwithstanding paragraph (*a*), no person shall operate an aircraft in which all passenger seats are not visible from the flight deck, unless it is equipped with a means of indicating to all passengers and cabin crew

(i) when seat belts shall be fastened ;

(ii) when smoking is not allowed ;

(iii) when and how oxygen equipment is to be used if the carriage of oxygen is required ;

(iv) location and use of life jackets or equivalent individual flotation devices where their carriage is required ;

(v) location of emergency equipment ; and

(vi) location and method of opening emergency exits.

Materials for Cabin Interiors.

7.10.1.4—(*a*) No person shall operate an aircraft unless each compartment used by the crew or passengers meet the following requirements of the State of Design—

(1) Materials must be at least flash resistant ;

(2) The wall and ceiling linings and the covering of upholstering, floors and furnishings must be flame resistant ;

(3) Each compartment where smoking is to be allowed must be equipped with self-contained ash trays that are completely removable and other compartments must be placarded against smoking ; and

(4) Each receptacle for used towels, papers and wastes must be of fire-resistant material and must have a cover or other means of containing possible fires started in the receptacles.

(b) For aircraft for which the State of Design has developed new airworthiness requirements for cabin interiors since original type certification, the owner of the aircraft shall ensure that all materials that do not meet current State of Design requirement shall have them replaced upon the first major overhaul of the aircraft cabin or refurbishing of the cabin interior with materials that meet the new requirements.

Materials for Cargo and Baggage Compartments.

7.10.1.5—*(a)* [AAC] Each cargo compartment shall have ceiling and sidewall liner panels which are constructed of materials which meet the test requirements for flame resistance of cargo compartment liners as prescribed for type certification.

Note : *The term "liner" includes any design feature, such as a joint or fastener, which would affect the capability of the liner to safely contain fire*.

Power Supply, Distribution, and Indication System.

7.10.1.6—*(a)* [AOC] No AOC holder may operate an aeroplane unless it is equipped with—

(1) A power supply and distribution system that meets the airworthiness requirements for certification of an aeroplane in the transport category, as specified by the Authority, or

(2) A power supply and distribution system that is able to produce and distribute the load for the required instruments and equipment, with use of an auxiliary power supply if any one power source or component of the power distribution system fails.

Note : *The use of common elements in the power system may be approved if the Authority finds that they are designed to be reasonably protected against malfunctioning.*

(3) A means for indicating the adequacy of the power being supplied to required flight instruments.

(*b*) [AOC] Engine-driven sources of energy, when used, shall be redundant.

Protective Circuit Fuses.

7.10.1.7.—(*a*) [AOC] No person may operate an aeroplane in which protective fuses are installed unless there are spare fuses available of appropriate ratings for replacement of those accessible in flight.

Icing Protection Equipment.

7.10.1.8.—(*a*) [AAC] No person may operate an aircraft in expected or actual icing conditions unless it is equipped for the prevention or removal of ice on windshields, wings, control surfaces, empennage, propellers, rotor blades, or other parts of the aircraft where ice formation will adversely affect the safety of the aircraft.

(*b*) [AAC] No person may operate an aircraft in expected or actual icing conditions at night unless it is equipped with a means to illuminate or detect the formation of ice. Any illumination that is used shall be of a type that will not cause glare or reflection that would handicap crew members in the performance of their duties.

Pitot Heat and Indication Systems.

7.10.1.9.—(*a*) [AAC] No person may operate an aircraft in instrument flight conditions unless it is equipped with a pitot heat system.

(*b*) [AOC] No AOC holder may operate an aeroplane equipped with a flight instrument pitot heating system unless the aeroplane is also equipped with an operable pitot heat indication system that complies with the following requirements:

(1) The indication provided shall incorporate an amber light that is in clear view of a flightcrew member. The indication provided shall be designed to alert the flightcrew if either :

(i) The pitot heating system is switched "off," and

(ii) The pitot heating system is switched "on" and any pitot tube heating element is inoperative, or

(2) An integrated flightcrew alerting system that will notify the crew if the pitot system is malfunctioning.

7.10.1.10.—(*a*) [AAC] No person may operate an aircraft unless it is equipped with a static pressure system vented to the outside atmospheric pressure so that they will be least affected by airflow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent. Static Pressure System.

(*b*) [AAC] No person may operate an aircraft in IFR or VFR at night unless it is equipped with a static pressure system vented to the outside atmospheric pressure so that they will be least affected by airflow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent and a means of selecting an alternative source of static pressure.

(c) [AOC] No person may operate an aircraft unless it is equipped with two independent static pressure systems, vented to the outside atmospheric pressure so that they will be least affected by airflow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent.

7.10.1.11.—(*a*) [AOC] No AOC holder may operate an aeroplane with a maximum certified take-off mass of more than 5700 kg unless it is equipped at each pilot station with a windshield wiper or equivalent means to maintain a clear portion of the windshield during precipitation. Windshield Wipers.

7.10.1.12.—(*a*) [AOC] No person may operate an aeroplane in commercial air transport operations under single pilot IFR or at night unless a chart holder is installed in an easily readable position that can be illuminated for night operations. Chart Holder.

7.10.1.13—*(a)* [AAC] No person shall operate an aeroplane intended to be operated above 15000 m (49, 000 ft) unless it is equipped with— Cosmic Radiation Detection Equipment.

(1) an instrument to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e., the total of ionising and neutron radiation of galactic and solar origin) and the cumulative dose on each flight or

(2) A system of on-board quarterly radiation sampling acceptable to the Authority as described in IS 7.10.1.13.

(3) A display unit readily visible to a flight crew member.

(*b*) The operator shall have the equipment in (a) above calibrated on the basis of assumptions acceptable to the Authority.

7.10.1.14—(*a*) [AAC] All seaplanes for all flights shall be equipped with equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable. Maritime Sound Signalling Device.

Anchors.

7.10.1.15—(*a*) [AAC]. No person shall operate a seaplane unless it is equipped with—

(1) One anchor, and

(2) One sea anchor (drogue)

Note: "Seaplanes" includes amphibians operated as seaplanes.

Vibration health monitoring system.

7.10.1.16—*(a)* A helicopter which has a maximum certificated take-off mass in excess of 3 175 kg or a maximum passenger seating configuration of more than 9 shall be equipped with a vibration health monitoring system.

NIGERIA CIVIL AVIATION REGULATIONS

PART 7—IMPLEMENTING STANDARDS

NIGERIA

For ease of reference the number assigned to each implementing standard corresponds to its associated regulation. For example IS: 1.2.1.8 would reflect a standard required in subsection 1.2.1.8.

NIGERIA CIVIL AVIATION REGULATIONS

PART 7—IMPLEMENTING STANDARDS

Category II: Instruments and Equipment Approval and Maintenance Requirements.

IS : 7.2.1.6—(*a*) General. The instruments and equipment required by Regulations 7.2.1.6 shall be approved as provided in this implementing standard before being used in Category II operations. Before presenting an aircraft for approval of the instruments and equipment, it must be shown that since the beginning of the 12th calendar month before the date of submission—

(1) The ILS localizer and glide slope equipment were bench checked according to the manufacturer's instructions and found to meet those standards specified in RTCA Paper 23-63/DO-177 dated March 14, 1963, "Standards Adjustment Criteria for Airborne Localizer and Glideslope Receivers."

(2) The altimeters and the static pressure systems were tested and inspected ; and

(3) All other instruments and items of equipment specified in Regulations 7. 2.1.6 that are listed in the proposed maintenance programme were bench checked and found to meet the manufacturer's specifications.

(*b*) *Flight control guidance system.*—All components of the flight control guidance system shall be approved as installed by the evaluation programme specified in paragraph (*e*) if they have not been approved for Category III operations under applicable type or supplemental type certification procedures. In addition, subsequent changes to make, model, or design of the components must be approved under this paragraph. Related systems or devices, such as the auto-throttle and computed missed approach guidance system, shall be approved in the same manner if they are to be used for Category II operations.

(*c*) *Radio altimeter*.—A radio altimeter must meet the performance criteria of this paragraph for original approval and after each subsequent alteration.

(1) It shall display to the flight crew clearly and positively the wheel height of the main landing gear above the terrain.

(2) It shall display wheel height above the terrain to an accuracy of ±5 feet or 5 percent, whichever is greater, under the following conditions :

(i) Pitch angles of zero to ±5° about the mean approach attitude.

(ii) Roll angles of zero to 20° in either direction.

(iii) Forward velocities from minimum approach speed up to 200 knots.

(iv) Sink rates from zero to 15 feet per second at altitudes from 100 to 200 feet.

(3) Over level ground, it must track the actual altitude of the aircraft without significant lag or oscillation.

(4) With the aircraft at an altitude of 200 feet or less, any abrupt change in terrain representing no more than 10 percent of the aircraft's altitude must not cause the altimeter to unlock, and indicator response to such changes must not exceed 0.1 seconds and, in addition, if the system unlocks for greater changes, it must reacquire the signal in less than 1 second.

(5) Systems that contain a push to test feature must test the entire system (with or without an antenna) at a simulated altitude of less than 500 feet.

(6) The system must provide to the flight crew a positive failure warning display any time there is a loss of power or an absence of ground return signals within the designed range of operating altitudes.

(d) Other instruments and equipment.—All other instruments and items of equipment required by Regulations 7.2.1.6 shall be capable of performing as necessary for Category II operations. Approval is also required after each subsequent alteration to these instruments and items of equipment.

(e) Evaluation programme.

(1) *Application*.—Approval by evaluation is requested as a part of the application for approval of the Category II manual.

(2) *Demonstrations*.—Unless otherwise authorised by the Authority, the evaluation programme for each aircraft requires the demonstrations specified in this paragraph. At least 50 ILS approaches shall be flown with at least five approaches on each of three different ILS facilities and no more than one half of the total approaches on any one ILS facility. All approaches shall be flown under simulated instrument conditions to a 30 m (100 foot) decision height and 90 percent of the total approaches made shall be successful. A successful approach is one in which—

(i) At the 30 m (100 foot) decision height, the indicated airspeed and heading are satisfactory for a normal flare and landing (speed must be ±5 knots of programmed airspeed, but may not be less than computed threshold speed if autothrottles are used) ;

(ii) The aircraft at the 30 m (100 foot) decision height, is positioned so that the cockpit is within, and tracking so as to remain within, the lateral confines of the runway extended ;

(iii) Deviation from glide slope after leaving the outer marker does not exceed 50 percent of full-scale deflection as displayed on the ILS indicator ;

(iv) No unusual roughness or excessive attitude changes occur after leaving the middle marker ; and

(v) In the case of an aircraft equipped with an approach coupler, the aircraft is sufficiently in trim when the approach coupler is disconnected at the decision height to allow for the continuation of a normal approach and landing.

(3) *Records*.—During the evaluation programme the following information shall be maintained by the applicant for the aircraft with respect to each approach and made available to the Authority upon request :

(i) Each deficiency in airborne instruments and equipment that prevented the initiation of an approach ;

(ii) The reasons for discontinuing an approach, including the altitude above the runway at which it was discontinued

(iii) Speed control at the 30 m (100 foot) DH if auto throttles are used ;

(iv) Trim condition of the aircraft upon disconnecting the auto coupler with respect to continuation to flare and landing ;

(v) Position of the aircraft at the middle marker and at the decision height indicated both on a diagram of the basic ILS display and a diagram of the runway extended to the middle marker. Estimated touchdown point shall be indicated on the runway diagram ;

(vi) Compatibility of flight director with the auto coupler, if applicable ;

(vii) Quality of overall system performance.

(4) *Evaluation*.—A final evaluation of the flight control guidance system is made upon successful completion of the demonstrations. If no hazardous tendencies have been displayed or are otherwise known to exist, the system is approved as installed.

(*f*) Each maintenance programme for Category II instruments and equipment shall contain the following :

(1) A list of each instrument and item of equipment specified in Regulations 7. 2.1.6 that is installed in the aircraft and approved for Category II operations, including the make and model of those specified in Regulations 7. 2.1.6 (*a*)(1).

(2) A schedule that provides for the performance of inspections under subparagraph (5) of this paragraph within 3 calendar months after the date of the previous inspection. The inspection shall be performed by a person authorised by Part 5, except that each alternate inspection may be replaced by a functional flight check. This functional flight check shall be performed by a pilot holding a Category II pilot authorisation for the type aircraft checked.

(3) A schedule that provides for the performance of bench checks for each listed instrument and item of equipment that is specified in Regulations 7.2.1.6 (*a*)(1) within 12 calendar months after the date of the previous bench check.

(4) A schedule that provides for the performance of a test and inspection of each static pressure system within 12 calendar months after the date of the previous test and inspection.

(5) The procedures for the performance of the periodic inspections and functional flight checks to determine the ability of each listed instrument and item of equipment specified in Regulations 7.2.1.6 (*a*)(1) to perform as approved for Category II operations including a procedure for recording functional flight checks.

(6) A procedure for assuring that the pilot is informed of all defects in listed instruments and items of equipment.

(7) A procedure for assuring that the condition of each listed instrument and item of equipment upon which maintenance is performed is at least equal to its Category II approval condition before it is returned to service for Category II operations.

(8) A procedure for an entry in the maintenance records that shows the date, airport, and reasons for each discontinued Category II operation because of a malfunction of a listed instrument or item of equipment.

(g) Bench check.— A bench check required by this section shall comply with this paragraph.

(1) Except as specified in paragraph (*g*)(2) of this subsection, it shall be performed by a certificated repair station holding one of the following ratings as appropriate to the equipment checked :

(i) An instrument rating ;

(ii) An avionics rating.

(2) It shall be performed by a certificated air operator on aircraft identified in its approved specific operating provisions with the approved authorisations to perform maintenance and approve for return to service its own aircraft maintained under a continuous maintenance programme under an equivalent system identified in Part 9.

(3) It shall consist of removal of an instrument or item of equipment and performance of the following :

(i) A visual inspection for cleanliness, impending failure, and the need for lubrication, repair, or replacement of parts ;

(ii) Correction of items found by that visual inspection ; and

(iii) Calibration to at least the manufacturer's specifications unless otherwise specified in the approved Category II manual for the aircraft in which the instrument or item of equipment is installed.

(h) Extensions.—After the completion of one maintenance cycle of 12 calendar months, a request to extend the period for checks, tests, and inspections is approved if it is shown that the performance of particular equipment justifies the requested extension.

Reduced Vertical Separation Minimum—Altimetry System Performance Requirements for Operations in RVSM Airspace.

IS: 7.4.1.3—(*a*) In respect of groups of aeroplanes that are nominally of identical design and build with respect to all details that could influence the accuracy of height-keeping performance, the height-keeping performance capability shall be such that the total vertical error (TVE) for the group of aeroplanes shall have a mean no greater than 25 m (80 ft) in magnitude and shall have a standard deviation no greater than 28 – 0.013z2 for 0 d" z d" 25 when z is the magnitude of the mean TVE in metres, or 92 – 0.004z2 for 0 d" z d" 80 where z is in feet. In addition, the components of TVE shall have the following characteristics :

(1) the mean altimetry system error (ASE) of the group shall not exceed 25 m (80 ft) in magnitude ;

(2) the sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245 ft) ; and

(3) the differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

(*b*) In respect of aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraph 1, the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics :

(1) the ASE of the aeroplane shall not exceed 60 m (200 ft) in magnitude under all flight conditions ; and

(2) the differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

Continued Serviceability and Inspection of Flight Recorder Systems.

IS : 7.8.1.4—*(a)* The operator shall, prior to the first flight of the day, monitor the built-in test features for the flight recorders and flight data acquisition unit (FDAU), when installed, by monitored by manual and/or automatic checks.

(b) The operator shall carry out annual inspections as follows :

(1) an analysis of the recorded data from the flight recorders shall ensure that the recorder operates correctly for the nominal duration of the recording ;

(2) the analysis of the FDR shall evaluate the quality of the recorded data to determine if the bit error rate (including those errors introduced by recorder, the acquisition unit, the source of the data on the aeroplane and by the tools used to extract the data from the recorder) is within acceptable limits and to determine the nature and distribution of the errors ;

(3) a complete flight from the FDR shall be examined in engineering units to evaluate the validity of all recorded parameters. Particular attention shall be given to parameters from sensors dedicated to the FDR. Parameters taken from the aircraft's electrical bus system need not be checked if their serviceability can be detected by other aircraft systems ;

(4) the readout facility shall have the necessary software to accurately convert the recorded values to engineering units and to determine the status of discrete signals ;

(5) an annual examination of the recorded signal on the CVR shall be carried out by replay of the CVR recording. While installed in the aircraft, the CVR shall record test signals from each aircraft source and from relevant external sources to ensure that all required signals meet intelligibility standards ;

(6) where practicable, during the annual examination, a sample of in-flight recordings of the CVR shall be examined for evidence that the intelligibility of the signal is acceptable ; and

(7) an annual examination of the recorded images on the AIR shall be carried out by replay of the AIR recording. While installed in the aircraft, the AIR shall record test images from each aircraft source and from relevant external sources to ensure that all required images meet recording quality standards.

(*c*) Flight recorder systems shall be considered unserviceable if there is a significant period of poor quality data, unintelligible signals, or if one or more of the mandatory parameters is not recorded correctly.

(*d*) The operator shall make available a report of the annual inspection on request to [the regulatory authorities] for monitoring purposes.

(1) Calibration of the FDR system: for those parameters which have sensors dedicated only to the FDR and are not checked by other means, recalibration shall be carried out at least every five years or in accordance with the recommendations of the sensor manufacturer to determine any discrepancies in the engineering conversion routines for the mandatory parameters and to ensure that parameters are being recorded within the calibration tolerances ; and

(2) when the parameters of altitude and airspeed are provided by sensors that are dedicated to the FDR system, there shall be a recalibration performed as recommended by the sensor manufacturer, or at least every two years.

Flight Data Recorders—Type And Parameters - Aeroplane.

IS : 7.8.2.1(A).—(*a*) Flight data recorders shall be classified as Type I, Type IA, Type II and Type IIA depending upon the number of parameters to be recorded and the duration required for retention of the recorded information.

(1) Type IA FDR. This FDR shall be capable of recording, as appropriate to the aeroplane, at least the 78 parameters in Table A.

(2) Type I FDR. This FDR shall be capable of recording, as appropriate to the aeroplane, at least the first 32 parameters in Table A.

(3) Types II and IIA FDRs. These FDRs shall be capable of recording, as appropriate to the aeroplane, at least the first 16 parameters in Table A.

Note : *This (the number 16) is from ICAO Annex I, Part 6, Appendix 8: 2.2.2.8. ICAO Annex 6, Part II, Appendix 2.3: 2.2.2.8 says a Type II FDR shall be capable of recording at least the first 15 parameters.*

(b) *Parameters.*—General. .

(1) The parameters that satisfy the requirements for FDRs are listed in the paragraphs below.

(2) The number of parameters to be recorded shall depend on aeroplane complexity.

(3) The parameters without an asterisk (*) are mandatory parameters which shall be recorded regardless of aeroplane complexity.

(4) In addition, the parameters designated by an asterisk (*) shall be recorded if an information data source for the parameter is used by aeroplane systems or the flight crew to operate the aeroplane.

(5) However, other parameters may be substituted with due regard to the aeroplane type and the characteristics of the recording equipment.

(c) Parameter.—Flight Path and Speed. The following parameters satisfy the requirements for flight path and speed :

(1) Pressure altitude.

(2) Indicated or calibrated airspeed.

(3) Air-ground status and each landing gear air-ground sensor when practicable.

(4) Total or outside air temperature.

(5) Heading (primary flight crew reference).

(6) Normal acceleration.

(7) Lateral acceleration.

(8) Longitudinal acceleration (body axis).

(9) Time or relative time count.

(10) Navigation data*: drift angle, wind speed, wind direction, latitude/longitude.

(11) Groundspeed*.

(12) Radio altitude*.

(d) Parameters.—Altitude. The following parameters satisfy the requirements for altitude :

(1) Pitch attitude.

(2) Roll attitude.

(e) Parameters.—Engine Power. The following parameters satisfy the requirements for engine power:

(1) Engine thrust power : propulsive thrust/power on each engine, cockpit thrust/power lever position.

(2) Thrust reverse status*.

(3) Engine thrust command*.

(4) Engine thrust target*.

(5) Engine bleed valve position*

(6) Additional engine parameters*: EPR, N1, indicated vibration level, N2, EGT, TLA, fuel flow, fuel cut-off lever position, N3.

(*f*) *Parameters—Configuration*.—The following parameters satisfy the requirements for configuration :

(1) Pitch trim surface position.

(2) Flaps*: trailing edge flap position, cockpit control selection.

(3) Slats*: leading edge flap (slat) position, cockpit control selection.

(4) Landing Gear*: landing gear, gear selector position.

(5) Yaw trim surface position*.

(6) Roll trim surface position*.

(7) Cockpit trim control input position pitch*.

(8) Cockpit trim control input position roll*

(9) Cockpit trim control input position yaw*

(10) Ground spoiler and speed brake*: Ground spoiler position, ground spoiler selection, speed brake position, speed brake selection.

(11) De-icing and/or anti-icing systems selection*

(12) Hydraulic pressure (each system)*

(13) Fuel quantity*

(14) AC electrical bus status*

(15) DC electrical bus status*

(16) APU bleed valve position*

(17) Computed centre of gravity*

(*g*) *Parameters—Operation.*—The following parameters satisfy the requirements for operation :

(1) Warnings.

(2) Primary flight control surface and primary flight control pilot input : pitch axis, roll axis, yaw axis.

(3) Marker beacon passage.

(4) Each navigation receiver frequency selection.

(5) Manual radio transmission keying and CVR/FDR synchronisation reference.

(6) Autopilot/autothrottle/AFCS mode and engagement status*

(7) Selected barometric setting*: pilot first officer (co-pilot)

(8) Selected altitude (all pilot selectable modes of operation)*

(9) Selected speed (all pilot selectable modes of operation)*

(10) Selected MACH (all pilot selectable modes of operation)*.

(11) Selected vertical speed (all pilot selectable modes of operation)*

(12) Selected heading (all pilot selectable modes of operation)*.

(13) Selected flight path (all pilot selectable modes of operation)*; course/ DSTRK, path angle

(14) Selected decision height*

(15) EFIS display format*: pilot, first officer (co-pilot).

(16) Multi function/engine/alerts display format *

(17) GPWS/TAWS/GCAS status*: selection of terrain display mode including pop-up display status, terrain alerts, both cautions and warning, and advisories, on/off switch position.

(18) Low pressure warning*: hydraulic pressure, pneumatic pressure.

(19) Computer failure*

(20) Loss of cabin pressure*

(21) TCAS/ACAS (traffic alert and collision avoidance system/airborne collision avoidance system)*

(22) Ice detection*

(23) Engine warning each engine vibration*

(24) Engine warning each engine overtemperature*

(25) Engine warning each engine oil pressure low*

(26) Engine warning each engine overspeed*

(27) Wind shear warning*

(28) Operational stall protection, stick shaker and pusher activation*.

(h) All cockpit flight control forces*: control wheel, control column, rudder pedal cockpit input forces.

(*i*) Vertical deviation*: ILS glide path, MLS elevation, GNSS approach path.

(*j*) Horizontal deviation*: ILS localizer, MLS azimuth, GNSS approach path.

(*k*) DME 1 and 2 distances*

(*l*) Primary navigation system reference*: GNSS, INS, VOR/DME, MLS, Loran C, ILS.

(m) Brakes*: left and right brake pressure, left and right brake pedal position.

(n) Date*

(o) Event marker*

(p) Head up display in use*.

(q) Para visual display on*.

Note 1 : *Parameter guidance for range, sampling, accuracy and resolution are as contained in the EUROCAE ED-112, Minimum Operational Performance Specification (MOPS) for Crash Protected Airborne Recorder Systems, or equivalent documents.*

Note 2 : *It is not intended that aeroplanes issued with an individual certificate of airworthiness before 1 January 2016 be modified to meet the range, sampling, accuracy or resolution guidance detailed in this Appendix*.

(*r) Parameters.—Flight Path and Speed as Displayed to the Pilot.—* The parameters that satisfy the requirements for flight path and speed as displayed to the pilot(s) are listed below. The parameters without an (*) are mandatory parameters which shall be recorded. In addition, the parameters designed by an (*) shall be recorded if an information source for the parameter is displayed to the pilot and is practicable to record :

(1) Pressure altitude.

(2) Indicated airspeed or calibrated airspeed.

(3) Heading (primary flight crew reference).

(4) Pitch attitude.

(5) Roll attitude.

(6) Engine thrust/power.

(7) Landing-gear status*.

(8) Total or outside air temperature*.

(9) Time*.

(10) Navigation data*: drift angle, wind speed, wind direction, latitude/ longitude.

(11) Radio altitude*.

TABLE — PARAMETER GUIDANCE FOR CRASH PROTECTED FLIGHT DATA RECORDERS – AEROPLANES

The first 16 (or 15) parameters satisfy the requirements for a Type II and Type IIA FDR.

The first 32 parameters satisfy the requirements for a Type I FDR.

The total 78 parameters satisfy the requirements for a Type IA FDR.

Serial Number	*Parameter*	*Measurement Range*	*Maximum Sampling and Recording interval (seconds)*	*Accuracy Limits (sensor input compared to FDR read-out)*	*Recording Resolution*
1.	Time (UTC when available, otherwise relative time count or GPS sync)	24 hours	4	±0.125% per hour	1 second
2.	Pressure-altitude–	-300 m (-1 000 ft) to maximum certificated altitude of aircraft 1 500 m (?5 000 ft)	1	±30 m to ±200 m (±100 ft to ±700 ft)	1.5 m (5 ft)
3.	Indicated airspeed or calibrated airspeed	95 km/h (50 kt) to max VSo (Note 1) VSo to 1.2 VD (Note 2)	1	±5% ±3%	1 kt (0.5 kt recommended)
4.	Heading (primary flight crew reference)	360 degrees	1	±2Ú	0.5Ú
5.	Normal acceleration (Note 3)–	-3 g to +6 g	0.125	±1% of maximum range excluding datum error of ±5%	0.004 g
6.	Pitch attitude	±75 ° or usable range whichever is greater	±0.25	±2 Ú ±2Ú	0.5Ú
7.	Roll attitude	±180Ú	±0.25		0.5Ú
8.	Radio transmission keying.	On-off one discrete)	1		
9.	Power on each engine (Note 4)	Full range	1 (per engine)	±2%	0.2% of full range or the resolution required to operate the aircraft.
10.*	Trailing edge flap and cockpit control selection.	Full range or each discrete position.	2	±5% or as pilot's indicator	0.5% of full range or the resolution required to operate the aircraft.
11.*	Leading edge flap and cockpit control selection.	Full range or each discrete position.	2	±5% or as pilot's indicator	0.5% of full.range or the resolution required to operate the aircraft.

Serial Number	*Parameter*	*Measurement Range*	*Maximum Sampling and Recording interval (seconds)*	*Accuracy Limits (sensor input compared to FDR read-out)*	*Recording Resolution*
12*	Thrust reverser position.	Stowed, in transit, and reverse.	1 (per engine)		
13.*	Ground spoiler/speed brake selection (selection and position).	Full range or each discrete position.	1	±2% unless higher accuracy uniquely required.	0.2% of full range
14.	Outside air temperature.	Sensor range.	2	±2’ C	0.3ÚC
15.*	Autopilot/auto throttle/AFCS mode and engagement status.	A suitable combination of discretes.	1		
16.	Longitudinal acceleration (Note 3).	+/-1 g	0.25	±0.015 g excluding a datum error of ±0.05 g	0.004 g
17.	Lateral acceleration (Note 3)	±1 g	0.25	±0.015 g excluding a datum error of ±0.05 g	0.004 g
18.	Pilot input and/or control surface position-primary controls (pitch, roll, yaw) (Note 5) (Note 6).	Full range	±0.25	±2Ú unless higher accuracy uniquely required.	0.2% of full range or as installed
19.	Pitch trim position	Full range	1	±3% unless higher accuracy uniquely required.	0.3% of full range or as installed.
20.*	Radio altitude–	-6 m to 750 m (–20 ft to 2 500 ft)	1	±0.6 m (±2 ft) or ±3% whichever is greater below 150 m (500 ft) and ±5% above 150 m (500 ft)	0.3 m (1 ft) below 150 m (500 ft); 0.3 m (1 ft) + 0.5% of full range above 150 m (500 ft).
21.*	Vertical beam deviation (ILS/GPS/GLS glide path, MLS elevation, IRNAV/IAN vertical deviation)	Signal range	1	±3%	0.3% of full range
22.*	Horizontal beam deviation (ILS/GPS/GLS localizer, MLS azimuth, IRNAV/IAN lateral deviation)	Signal range	1	±3%	0.3% of full range
23.	Marker beacon passage	Discrete	1		

Master warning

Serial Number	Parameter	Measurement Range	Maximum Sampling and Recording interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
24.	Master warning	Discrete	1		
25.	NAV receiver frequency selection (Note 7)	Full range	4	As installed	
26.*	DME 1 and 2 distance (includes Distance to runway threshold (GLS) and Distance to missed approach point (IRNAV/ IAN) (Notes 7 and 8	0 – 370 km (0-200 NM)	4	As installed	1852 m (1 NM)
27.	Air/ground status	Discrete	1		
28.*	GPWS/TAWS/GCAS status (selection of terrain display mode including pop-up display status) and (Terrain alerts, both cautions and warnings, and advisories) and (on/ off switch position)	Discrete	1		
29.*	Angle of attack	Full range	0.5	As installed	0.3% of full range
30.*	Hydraulics, each system (low pressure)	Discrete	2		0.5% of full range
31.*	Navigation data (latitude/ longitude, ground speed and drift angle) (Note 9)	As installed	1	As installed	
32.*	Landing gear and gear selector position	Discrete	4	As installed	
33.*	Groundspeed	As installed	1	Data should be obtained from the most accurate system	1 kt
34.	Brakes (left and right brake pressure, left and right brake pedal position)	(Maximum metered brake range, discretes or full range)	1	1±5%	2% of full range
35.*	Additional engine parameters (EPR, N1, indicated vibration level, N2; EGT, fuel flow, fuel cut-off lever position, N3)	As installed	Each engine each second	As installed	2% of full range
36.*	CAQS/ACAS (traffic alert and collision avoidance system)	Discretes	1	As installed	

Serial Number	Parameter	Measurement Range	Maximum Sampling and Recording interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
37*	Windshear warning	Discrete	1	As installed	
38*	Selected barometric setting (pilot, co-pilot)	As installed	64	As installed	0.1 mh (0.01 in-Hg)
39*	Selected altitude (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
40*	Selected speed (all pilot selectable modes of operations)	As installed	1	As installed	Sufficient to determine crew selection
41*	Selected Mach (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
42*	Selected vertical speed (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
43*	Selected heading (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
44*	Selected flight path (all pilot selectable modes of operation) (course/DSTRK, path angle; final approach path (IRNAV/IAN))		1	As installed	
45*	Selected Decision Height	As installed	64	As installed	Sufficient to determine crew selection
46*	EFIS display format (pilot, co-pilot)	Discrete(s)	4	As installed	
47*	Multi-function/engine/ alerts display format	Discrete(s)	4	As installed	
48*	AC electrical bus status	Discrete(s)	4	As installed	
49*	DC electrical bus status	Discrete(s)	4		
50*	Engine bleed valve position	Discrete(s)	4	As installed	
51*	APU bleed valve position	Discrete(s)	4		
52*	Computer failure	Discrete(s)	**4**	As installed	
53*	Engine thust command	As installed	2		

Serial Number	Parameter	Measurement Range	Maximum Sampling and Recording interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
54'	Engine thrust target	As installed	4	As installed	2% of full range
55'	Computed centre of gravity	As installed	64	As installed	1 % of full range
56'	Fuel quantity in CG trim tank	As installed	64	As installed	1 % of full range
57'	Head up display in use	As installed	4	As installed	
58'	Para visual display on/off	As installed	1	As installed	
59'	Operational stall protection, stick shaker and pusher activation	As installed	1	As installed	
60'	Primary navigation system reference (GNSS, INS, VORIDME, MLS, Loran C, localizer glideslope)	As installed	4	As installed	
61'	Ice detection	As installed	4	As installed	
62'	Engine warning each engine vibration	As installed	1	As installed	
63'	Engine warning each engine over temperature	As installed	1	As installed	
64'	Engine warning each engine oil pressure low	As installed	1	As installed	
65'	Engine warning each engine over speed	As installed	1	As installed	
66'	Yaw Trim Surface Position	Full range	2	±3% unless higher accuracy uniquely required	0.3% of full range
67'	Roll Trim Surface Position	Full range	2	±3% unless higher accuracy uniquely required	0.3% of full range
68'	Yaw or sideslip angle	Full range	1	±5%	0.5%
69'	De-icing and/or anti-icing systems selection	Descrete(s)	4		
70'	Hydraulic pressure (each system)	Full range	2	±5%	100 psi
71'	Loss of cabin pressure	Discrete			
72'	Cockpit trim control input position	Full range	1	±5%	0.2% of full range or as installed

Serial Number	Parameter	Measurement Range	Maximum Sampling and Recording interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
73*	Cockpit trim control input Position Roll	Full range	1	±5%	0.2% of full range or as installed
74*	Cockpit trim control input position Yaw	Full range	1	±5%	0.2% of full range or as installed
75*	All cockpit flight control input forces (control wheel, control column, rudder pedal)	Full range (±311 N (±70 IbD, ±378 N (±85IbD, ±734 N (±165IbD	1	±5%	0.2% of full range or as installed
76*	Event marker	Discrete	1		
77*	Date	365 days	64		
78*	ANP or EPE or EPU	As installed	4	As installed	

Note 1 : VSo *stalling speed or minimum steady flight speed in the ndingonfiguration.*

Note 2 : *VD design diving speed.*

Note 3 : *Refer to Regulations* 7.8. 2.2(*a*)(12) *for increased recordingequirements.*
Note 4 : *Record sufficient inputs to determine power.*

Note 5 : *For aeroplanes with control systems in which movement of a control surface will back drive the pilot's control, "or" applies. For aeroplanes with control systems in which movement of a control surface will not back drive the pilot's control, "and" applies. In aeroplanes with split surfaces, a suitable combination of inputs is acceptable in lieu of recording each surface separately.*

Note 6 : *Refer to Regulations* 7.8. *2.2*(*a*)(13) *for increased recording requirements.*

Note 7 : *If signal available in digital form.*

Note 8 : *Recording of latitude and longitude from INS or other navigation system is* a *preferred alternative.*

Note 9 : *If signals readily available.*

If further recording capacity is available, recording of the following additional information should be considered :

(*a*) operational information from electronic display systems, such as electronic flight instrument systems (EFIS), electronic centralised aircraft monitor (ECAM) and engine indication and crew alerting system (EICAS). Use the following order of priority :

(1) parameters selected by the flightcrew relating to the desired flight path, *e.g.* barometric pressure setting, selected altitude, selected airspeed, decision height, and autoflight system engagement and mode indications if not recorded from another source ;

(2) display system selection/status, e.g. SECTOR, PLAN, ROSE, NAV, WXR, COMPOSITE, COPY, ETC. ;

(3) warnings and alerts ;

(4) the identity of displayed pages for emergency procedures and checklists ;

(b) retardation information including brake application for use in the investigation of landing overruns and rejected take-offs.

Flight Data Recorders— Type and Parameters- Helicopters.

IS : 7.8.2.1(B)—*(a)* Flight data records shall be classified as Type IV, Type IVA, and Type V depending upon the number of parameters to be recorded.

(1) Type IV FDRs shall be capable of recording, as appropriate to the helicopter, at least the first 30 parameters in Table B below.

(2) Type IVA FDRs shall be capable or recording, as appropriate to the helicopter, at least the first 48 parameters in Table B below.

(3) Type V FDRs shall be capable of recording, as appropriate to the helicopter, at least the first 15 parameters in Table B below.

(4) For all FDR types, if further recording capability is available, recording of the following additional information shall be considered :

(5) Additional operational information from electronic displays, such as electronic flight instrument systems (EFIS), electronic centralised aircraft monitor (ECAM) and engine indication and crew alerting system (EICAS) ; and

(6) Additional engine parameters (EPR, N1, fuel flow, etc.).

(*b*) The parameters that satisfy the requirements for a Type IV ; Type IVA, and Type V FDRs are listed below. The number of parameters to be recorded shall depend on helicopter complexity. The parameters without an asterisk (*) are mandatory parameters that shall be recorded. The parameters designated by an asterisk (*) shall also be recorded if an information data source for an asterisked parameter is used by helicopter systems or the flightcrew to operate the helicopter. However, other parameters may be substituted with due regard to the helicopter type and the characteristics of the recording equipment.

(c) The following parameters satisfy the requirements for flight path and speed :

(1) Pressure altitude.

(2) Indicated airspeed.

(3) Total or outside air temperature.

(4) Heading (primary flightcrew reference).

(5) Normal acceleration.

(6) Lateral acceleration.

(7) Longitudinal acceleration (body axis).

(8) Time or relative time count.

(9) Navigation data* : drift angle, wind speed, wind direction, latitude/ longitude.

(10) Radio altitude*.

(d) The following parameters satisfy the requirements for attitude :

(1) Pitch attitude.

(2) Roll attitude.

(3) Yaw rate.

(e) The following parameters satisfy the requirements for engine power :

(1) Power on each engine: free power turbine speed (Nf), engine torque, engine gas generator speed (Ng), cockpit power control position.

(2) Rotor : main rotor speed, rotor brake.

(3) Main gearbox oil pressure*.

(4) Gearbox oil temperature*, main gearbox oil temperature, tail rotor gearbox oil temperature

(5) Engine exhaust gas temperature (T4)*.

(6) Turbine inlet temperature (TIT)*.

(f) The following parameters satisfy the requirements for configuration :

(1) Landing gear or gear selector position*.

(2) Fuel quality*.

(3) Ice detector liquid water content*.

(g) The following parameters satisfy the requirements for operation :

(1) Hydraulics low pressure.

(2) Warnings.

(3) Primary flight controls—pilot input and/or control output position: collective pitch, longitudinal cyclic pitch, lateral cyclic pitch, tail rotor petal, controllable stabilator, hydraulic selection.

(4) Marker beacon passage.

(5) Each navigation receiver frequency selection.

(6) AFCS mode and engagement status*.

(7) Stability augmentation system engagement*.

(8) Indicated sling load force*.

(9) Vertical deviation*: ILS glide path, GNSS approach path.

(10) Horizontal deviation*: ILS localizer, GNSS approach path.

(11) DME 1 and 2 distances*.

(12 Altitude rate*.

(13) Ice detector liquid water content*.

(14) Helicopter health and usage monitor system (HUMUS)* engine data, chip detectors, track timing, exceedance discretes, broadband average engine vibration.

Note: Parameter requirements, including range, sampling, accuracy and resolution are as contained in the Minimum Operational Performance Specification (MOPS) for Crash Protected Airborne Recorder Systems, or equivalent documents.

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TABLE : PARAMETERS FOR FLIGHT DATE RECORDER—HELICOPTERS

Serial Number	Parameter	Measurement Range	Maximum Sampling and Recording Interval (Seconds)	Accuracy Limits (Sensor Input Compared to FDR Read-out)	Recording Resolution
1.	Time (UTC when available, otherwise relative time count or GPS time sync)	24 hours	4	±0.125% per hour	1s
2.	Pressure-altitude-	-300 m (-1 000 ft) to maximum certificated altitude of aircraft +1 500 m (+5 000 ft)	1	±30 m to ±200 m (±100 ft to ±700 ft)	1.5 m (5 ft)
3.	Indicated airspeed	As the installed measuring system 360 degrees	1	±3%	1 kt
4.	Heading	-3 g to +6 g	1	± 2?	0.5?
5.	Normal acceleration-	±75 ? or 100% of usable range whichever is greater	0.125	±0-.9 g excluding a datum error of ±g	0.004 g
6.	Pitch attitude	±180?	0.5	± 2?	0.5?
7.	Roll attitude	On-off (one discrete)	0.5	±2?	0.5?
8.	Radio transmission keying	Full range	1	---	---
9.	Power on each engine		1 (per engine)	±2%	0.1% of full range
10.	Main rotor :				
	Main rotor speed	50-130%	0.51	±2%	0.3% of full range
	Rotor brake	Discrete		---	---
11.	Pilot input and/or control surface position-primary controls (Col lective pitch, longitudinal cyclic pitch, lateral cyclic pitch, tail rotor pedal)	Full range	0.5 (0.25 recommended)	±2% unless higher accuracy uniquely required.	0.5% of operating range
12.	Hydraulics, each system (low pressure and selection)	Discrete	1	---	---
13.	Outside air temperature	Sensor range	2	±2?C	0.3?C
14*.	Autopilot/auto throttle/ AFCS mode and engagement status	A suitable combination of discretes	1	---	---
15*.	Stability augmentation system engagement	Discrete	1	---	---

Serial Number	*Parameter*	*Measurement Range*	*Maximum Sampling and Recording Interval (Seconds)*	*Accuracy Limits (Sensor Input Compared to FDR Read-out)*	*Recording Resolution*
16*	Main gearbox oil pressure	As installed	1	As installed	6.895 kN/m2 (1 psi)
17*	Main gearbox oil temperature	As installed	2	As installed	1?C
18	Yaw acceleration (or yaw rate)	±400?/second	0.25	±1.5% max range excluding datum error of ±5%	±2?s
19*	Sling load force	0-200% of certified load	0.5	±3% of max range	0.5% for maximum certified load
20	Longitudinal acceleration	±1 g	0.25	±0.015 g excluding datum error of ± 0.05 g	0.0004 g
21	Lateral acceleration	±1 g	0.25	±0.015 g excluding datum error of ± 0.05 g	0.0004 g
22*	Radio altitude-	-6 m to 750 m (-20 ft to 2 500 ft)	1	±0.6 m (±2 ft) or ±3% whichever is greater below 150 m (500 ft) and ±5% above 150 m (500 ft)	0.3 m (1ft) below 150 m (500 ft), 0.3 m (1 ft) = 0.5% of full range above 150 m (500 ft)
23*	Vertical beam deviation	Signal range	1	±3%	0.3% of full range
24*	Horizontal beam deviation	Signal range	1	±3%	0.3% of full range
25	Marker beacon passage	Discrete	1	---	---
26	Warnings	Discrete(s)	1	---	---
27	Each navigation receiver frequency selection	Sufficient to determine selected frequency	4	As installed	----
28*	DME 1 and 2 distance	0-370 km (0-200 NM)	4	As installed	1.852 m (1 NM)
29*	Navigation data (latitude/longitude, ground speed, drift angle, wind speed, wind direction)	As installed	2	As installed	As installed
30*	Landing gear or gear selector position	Discrete	4	---	---
31*	Engine exhaust gas temperature (T4)	As installed	1	As installed	
32*	Turbine inlet temperature (ITI/ITT)	As installed	1	As installed	
33*	Fuel contents	As installed	4	As installed	
34*	Altitude rate	As installed	1	As installed	
35*	Ice detection	As installed	4	As installed	
36*	Helicopter health and usage monitor system	As installed	1	As installed	

Serial Number	*Parameter*	*Measurement Range*	*Maximum Sampling and Recording Interval (Seconds)*	*Accuracy Limits (Sensor Input Compared To Fdr Read-out)*	*Recording Resolution*
37	Engine control modes	Discrete	1	-----	-----
38*	Selected barometric setting (pilot and co-pilot)	As installed	64	As installed	0.1 mb (0.01 in Hg)39*
39*	Selected altitude (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
40*	Selected speed (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
41*	Selected Mach (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
42*	Selected vertical speed (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
43*	Selected heading (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
44*	Selected flight path (all pilot selectable modes of operation)	As installed	1	As installed	Sufficient to determine crew selection
45*	Selected decision height	As installed	4	As installed	Sufficient to determine crew selection
46*	EFIS display format (pilot and co-pilot)	Discrete(s)	4	---	---
47*	Multi-function/engine/ alerts display format	Discrete(s)	4	---	---
48*	Event marker	Discrete		1	---

Aircraft Equippage for Operations - Aircraft Data Recording System (ADRS).

IS : 7.8.2.2—*(a)* ADRS shall be capable of recording, as appropriate to the aircraft, at least the essential (E) parameters in the Table below.

(b) The measurement range, recording interval and accuracy of parameters on installed equipment is usually verified by methods approved by the [appropriate certificating Authority].

(c) Documentation concerning parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance information shall be maintained by the operator. The documentation shall be sufficient to ensure that accident investigation authorities have the necessary information to read out the data in engineering units.

TABLE—PARAMETER GUIDANCE FOR AIRCRAFT DATA RECORDING SYSTEMS

No	*Parameter Name*	*Parameter Category*	*Minimum Recording Range*	*Minimum Recording Interval in Seconds*	*Maximum Recording Accuracy*	*Minimum Recording Resolution*	*Remarks*
1	Heading (Magnetic or True)	R*	±180°	1	±2°	0.5°*	If not available, record rates.
2	Pitch attitude	E*	±90°	0.25	±2°	0.5°	*If not available, record rates
3	Roll attitude	E*	±180°	0.25	±2°	0.5°	*If not available, record rates.
4	Yaw rate	E*	±300°	0.25	±1% + drift of 360°/hr	2°	*Essential if no heading available.
5	Pitch rate	E*	±300°	0.25	±1% + drift of 360°/hr	2°	*Essential if no pitch attitude available.
6	Roll rate	E*	±300°	0.25	±1% + drift of 360°/hr	2°	*Essential if no roll rate available.
7	Positioning system : latitude/ longitude.	E	Latitude: ±90° ; Longitude: ±180°	2 (1 if available)	As installed (0.00015° recommended	0.00005°	—
8.	Positioning : system estimated error.	E*	Available range	2 (1 if available)	As installed	As installed	*If available
9.	Positioning system : altitude.	E	-300 m (-1,000 ft) to maximum certificated altitude of aeroplane +1,500 m (5,000 ft)	2 (1 if available)	As installed (±15 m (±50 ft) recommended)	1.5 m (5 ft)	—
10.	Positioning system : time.	E	24 hours	1	±0.5 second	0.1 second	*UTC time preferred where available
11	Positioning system : ground speed.	E	0-1 000 kt	2 (1 if available)	As installed (±5 kt recommended)	1 kt	—
12	Positioning system: channel.	E	0-360°	2 (1 if available)	As installed recommended	(±2°) 0.5°	—
13.	Normal acceleration.	E	-3 g to + 6 g(°) if available)	0.25 (0.125 (±0.09 g	As installed excluding a datum error of ±45 g recommended)	0.004 g	—
14.	Longitudinal acceleration.	E	±1 g(*)	0.25 (0.125 if available)	As installed (±0.015 g excluding a datum error of ±0.05 g recommended)	0.004 g	—

No	Parameter Name	Parameter Category	Minimum Recording Range	Minimum Recording Interval in Seconds	Maximum Recording Accuracy	Minimum Recording Resolution	Remarks
15.	Lateral acceleration	E	±1 g(*)	0.25 (0.125 if available)	As installed (±0.015 g	0.004 g	—
16.	External static pressure (or pressure altitude)	R	34.4 mb (3.44 in -Hg) to 310.2 mb (31.03 in-Hg) or available sensor range.	1	As installed (±1 mb (0.1 in-Hg) or ±30 m (±100 ft) to ±210 m (±700 ft) recommended).	0.1 mb (0.01 in -Hg) or 1.5 m (5 ft)	—
17.	Outside air temperature (or total air temperature)	R	-50^{o} to $+90^{o}C$ or available sensor range	2	As installed) ($\pm 2^{o}C$ recommended	$1^{o}C$	—
18.	Indicated air speed.	R	As the installed pilot display or measuring system or available sensor range.	1	As installed (±3% recommended)	1 kt (0.5 kt recommended)	—
19.	Engine RPM	R	Full range including overspeed condition.	Each engine each second.	As installed	0.2% of full range	—
20.	Engine oil pressure.	R	Full range	Each engine each second.	As installed (5% of full range).	2% of full range	—
21.	Engine oil temperature.	R	Full range	Each engine each second	As installed (5% of full range)	2% of full range	—
22.	Fuel flow or pressure.	R	Full range	Each engine each second	As installed	2% of full range	—
23.	Manifold pressure.	R	Full range	Each engine each second	As installed	0.2% of full range	—
24.	Engine thrust/ power/ torque parameters required to determine propulsive thrust/power.	R	Full range	Each engine	As installed each second	0.1% of full range	*Sufficient parameters e.g. EPRN/NI or torque/Np as appropriate to the particular engine particular engine shall be recorded to determine power in both normal and reverse thrust. A margin for possible overspeed should be provided.

No	Parameter Name	Parameter Category	Minimum Recording Range	Minimum Recording Interval in Seconds	Maximum Recording Accuracy	Minimum Recording Resolution	Remarks
25.	Engine gas generator speed (Ng).	R	0-150%	Each engine	As installed each second.	0.2% of full range	—
26.	Free power turbine speed (Nf).	R	0-150%	Each engine each second	As installed	0.2% of full range	—
27.	Coolant temperature.	R	Full range	1	As installed (±5?C recommended)	1°C	—
28.	Main voltage.	R	Full range	Each engine each second	As installed	1 Volt	—
29.	Cylinder head temperature	R	Full range	Each cylinder each second	As installed	2% of full range	—
30.	Flaps position.	R	Full range or each discrete position	2	As installed	0.5°	—
31.	Primary flight control surface position.	R	Full range	0.25	As installed	0.2% of full range	—
32.	Fuel quantity.	R	Full range	4	As installed	1% of full range	—
33.	Exhaust gas temperature.	R	Full range	Each engine each second	As installed	2% of full range	—
34.	Emergency voltage.	R	Full range	Each engine each second	As installed	1 Volt	—
35.	Trim surface position.	R	Full range or each	1	As installed	0.3% of full range	—
36.	Landing gear position*.	R	Each discrete position	Each gear every 2	As installed	—	*Where available, record up-and-locked and down-and-locked position
37.	Novel/ unique aircraft features.	R	As required	As required	As required	As required	—

Key :
E : *Essential parameters.*
R : Recorded parameters.

Data Link Recorder Applicability.

IS : 7.8.4.1—(*a*) Messages applying to the applications listed below shall be recorded. Applications without the asterisk (*) are mandatory applications which shall be recorded regardless of the system complexity. Applications with an (*) shall be recorded only as far as is practicable given the achitecture of the system.

(1) Data link initiation capability ;

(2) Controller-pilot data link communications ;

(3) Data link –flight information services ;

(4) Automatic dependent surveillance-contract ;

(5) Automatic dependent surveillance-broadcast* ;

(6) Aeronautical operational control*.

(*b*) Descriptions of the applications for data link recorders are contained in the Table below.

TABLE—DESCRIPTION OF APPLICATIONS FOR DATA LINK RECORDERS

Item No.	*Application Type*	*Application Description*	*Recording Content*
1.	Data link Initiation.	This includes any applications used to logon to or initiate data link service. In FANS-1/A and ATN, these are ATS Facilities Notification (AFN) and Context Management (CM) respectively.	C
2.	Controller/Pilot Communication.	This includes any application used to exchange requests, clearances, instructions and reports between the flight crew and controllers on the ground. In FANS-1/A and ATN, this includes the CPDLC application. It also includes applications used for the exchange of oceanic (OCL) and departure clearances (DCL) as well as data link delivery of taxi clearances.	C
3.	Addressed Surveillance.	This includes any surveillance application in which the ground sets up contracts for delivery of surveillance data. In FANS-1/A and ATN, this includes the Automatic Dependent Surveillance (ADS-C) application. Where parametric data are reported within the message they shall be recorded within the message they shall be recorded unless data from the same source are recorded on the FDR.	C
4.	Flight Information	This includes any service used for delivery of flight information to specific aircraft. This includes, for example, D-METAR, D-ATIS, D-NOTAM and other textual data link services.	C
5.	Aircraft Broadcast Surveillance.	This includes Elementary and Enhanced Surveillance Systems, as well as ADS-B output data. Where parametric data sent by the aircraft are reported within the message they shall be recorded unless data from the same sources are recorded on the FDR.	M*
6.	Aeronautical Operational Control Data.	This includes any application transmitting or receiving data used for AOC purposes.	M*

Key :
C : Complete contents recorded.
M : Information that enables correlation to any associated records stored separately from the aircraft.
* Applications to be recorded only as far as is practicable given the architecture of the system.

Emergency Exit Equipment-Passengers.

IS: 7.9.1.2—(*a*) The emergency exit equipment for aeroplanes in 7. 9.1.2(*a*) shall meet the following requirements.

(1) The assisting means for a floor level emergency exit shall meet the requirements under which the aeroplane was type certified.

(2) The location of each passenger emergency exit shall be—

(i) Recognisable from a distance equal to the width of the cabin.

(ii) Indicated by a sign visible to occupants approaching along the main passenger aisle.

(3) There shall be an emergency exit locating sign—

(i) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom ;

(ii) Next to each floor level passenger emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and

(iii) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible, the sign may be placed at another appropriate location.

(4) Each passenger emergency exit marking and each locating sign shall be manufactured to meet the interior emergency exit marking requirements under which the aeroplane was type certified, unless the Authority cites different requirements for compliance with this paragraph.

Note : *No sign may continue to be used if its luminescence (brightness) decreases to below 250 micro lamberts.*

(5) Sources of general cabin illumination may be common to both the emergency and the main lighting systems if the power supply to the emergency light system is independent of the power supply to the main lighting system.

(6) The emergency lighting system shall provide enough general lighting in the passenger cabin so that the average illumination, when measured at 40-inch intervals at seat armrest height, on the centerline of the main passenger aisle, is at least 0.05 foot-candles.

(7) Each emergency light shall—

(i) Be operable manually both from the flightcrew station and from a point in the passenger compartment that is readily accessible to a normal cabin crew member seat ;

(ii) Have a means to prevent inadvertent operation of the manual controls ; and

(iii) When armed or turned on at either station, remain lighted or become lighted upon interruption of the aeroplane's normal electric power ;

(iv) Provide the required level of illumination for at least 10 minutes at the critical ambient conditions after emergency landing ;

(v) Have a cockpit control device that has an “on”, “off”, and “armed” position.

(8) The location of each passenger emergency exit operating handle and instructions for opening the exit shall be shown in accordance with the requirements under which the aeroplane was type certified, unless the Authority cites different requirements for compliance with this paragraph.

(9) No operating handle or operating handle cover may continue to be used if its luminescence (brightness) decreases to below 100 micro lamberts.

(10) Access to emergency exits shall be provided as follows for each passenger carrying aeroplane :

(i) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, shall be unobstructed and at least 20 inches wide.

(ii) There shall be enough space next to each Type I or Type II emergency exit to allow a crew member to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required in paragraph (*j*)1 of this section.

(iii) There shall be access from the main aisle to each Type III and Type IV exit. The access from the aisle to these exits shall not be obstructed by seats, berths, or other protrusions in a manner that would reduce the effectiveness of the exit. In addition, the access shall meet the emergency exit access requirements under which the aeroplane was type certificated, unless the Authority cites different requirements for compliance with this paragraph.

(iv) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway shall not be obstructed. However, curtains may be used if they allow free entry through the passageway.

(v) No door may be installed in any partition between passenger compartments.

(vi) If it is necessary to pass through a doorway separating the passenger cabin from other areas to reach any required emergency exit from any passenger seat, the door shall have a means to latch it in open position and the door shall be latched open during each takeoff and landing. The latching means shall be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, prescribed in the airworthiness standards for type certification in the transport category as cited by the Authority.

(11) Each passenger emergency exit and the means of opening that exit from the outside shall be marked on the outside of the aeroplane with a 2-inch coloured band outlining the exit on the side of the fuselage.

(12) Each passenger emergency exit marking, including the band, shall be readily distinguishable from the surrounding fuselage area by contrast in colour and shall comply with the following :

(i) If the reflectance of the darker colour is 15 percent or less, the reflectance of the lighter colour shall be at least 45 percent.

(ii) If the reflectance of the darker colour is greater than 15 percent, at least a 30 percent difference between its reflectance and the reflectance of the lighter colour shall be provided.

Note : *"Reflectance" is the ratio of the luminous flux reflected by a body to the luminous flux it receives.*

(iii) Exits that are not in the side of the fuselage shall have external means of opening and applicable instructions marked conspicuously in red or, if red is inconspicuous against the background colour, in bright chrome yellow and, when the opening means for such an exit is located on only one side of the fuselage, a conspicuous marking to that effect shall be provided on the other side.

(13) Each passenger-carrying aeroplane shall be equipped with exterior lighting that meets the requirements under which that aeroplane was type certificated, unless the Authority cites different requirement for compliance with this paragraph.

(14) Each passenger-carrying aeroplane shall be equipped with a slip-resistant escape route that meets the requirements under which that aeroplane was type certificated, unless the Authority cites different requirements for compliance with this paragraph.

(15) Each floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit and each tail cone exit, shall meet the requirements of this section for floor level emergency exits.

Note: The Authority may grant a deviation from this paragraph if he finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

(16) Approved emergency exits in the passenger compartments that are in excess of the minimum number of required emergency exits shall meet all of the applicable provisions of this subsection section and shall be readily accessible.

(17) On each large passenger-carrying aeroplane with a ventral exit and tail cone exit shall be—

(i) Designed and constructed so that it cannot be opened during flight ; and

(ii) Marked with a placard readable from a distance of 30 inches and installed at a conspicuous location near the means of opening the exit, stating that the exit has been designed and constructed so that it cannot be opened during flight.

(18) *Portable lights*.—No person may operate a passenger carrying aeroplane unless it is equipped with flight stowage provisions accessible from each cabin crew member seat.

IS: 7.9.1.11—*(a)* The required first-aid kits shall include at least the following :

First- Aid Kits and Universal Precaution Kits.

(1) Antiseptic swabs (10/pack)
(2) Bandage : adhesive strips
(3) Bandage : gauze 7.5 cm × 4.5 m
(4) Bandage : triangular; safety pins
(5) Dressing : burn 10 cm × 10 cm
(6) Dressing : compress, sterile 7.5 cm × 12 cm
(7) Dressing : gauze, sterile 10.4 cm × 10.4 cm
(8) Tape: adhesive 2.5 cm (roll)
(9) Steri-strips (or equivalent adhesive strip)
(10) Hand cleanser or cleansing towelettes
(11) Pad with shield, or tape, for eye
(12) Scissors : 10 cm [as allowed by national regulations]
(13) Tape : Adhesive, surgical 1.2 cm × 4.6 m
(14) Tweezers : splinter
(15) Disposable gloves (multiple pairs)
(16) Thermometers (non-mercury)
(17) Mouth-to-mouth resuscitation mask with one-way valve
(18) First-aid manual, current edition
(19) Incident record form
(20) Mild to moderate analgesic [as allowed by national regulations]
(21) Antiemetic [as allowed by national regulations]
(22) Nasal decongestant [as allowed by national regulations]
(23) Antacid [as allowed by national regulations]
(24) Antihistamine [as allowed by national regulations]

(*b*) The required universal precaution kits shall include at least the following :

(1) Dry powder that can convert small liquid spill into a sterile granulated gel.
(2) Germicidal disinfectant for surface cleaning.
(3) Skin wipes.
(4) Face/eye mask (separate or combined).
(5) Gloves (disposable).
(6) Protective apron.
(7) Large absorbent towel.
(8) Pick-up scoop with scraper.
(9) Bio-hazard disposal waste bag.
(10) Instructions.

Note: The carriage of automated external defibrillators (AED) should be determined by operators or the Authority on the basis of a risk assessment taking into account the particular needs of the operation.

Emergency Medical Kit-Aeroplanes

IS : 7.9.1.12—(*a*) The required medical kit shall include the following equipment :

(1) Stethoscope.
(2) Sphygmomanometer (electronic preferred).
(3) Airways, oropharyngeal (three sizes).
(4) Syringes (appropriate range of sizes).
(5) Needles (appropriate range of sizes).
(6) Intravenous catheters (appropriate range of sizes).
(7) Antiseptic wipes.
(8) Gloves (disposable).
(9) Needle disposal box.
(10) Urinary catheter.
(11) System for delivering intravenous fluids.
(12) Venous tourniquet.
(13) Sponge gauze.
(14) Tape-adhesive.
(15) Surgical mask.
(16) Emergency tracheal catheter (or large gauge intravenous cannula).
(17) Umbilical cord clamp.
(18) Thermometers (non-mercury).
(19) Basic life support cards.
(20) Bag-valve mask.
(21) Flashlight and batteries.

Note : *If a cardiac monitor is available (with or without an AED) add to the above list.*

(*b*) [AOC] The required medical kit shall include the following medication :

(1) Epinephrine 1:1,000
(2) Antihistamine – injectable.
(3) Dextrose 50% (or equivalent) – injectable : 50 ml.
(4) Nitroglycerin tablets, or spray.
(5) Major analgesic.
(6) Sedative anticonvulsant – injectable.
(7) Antiemetic – injectable.
(8) Bronchial dilator – inhaler.
(9) Atropine – injectable.
(10) Adrenocortical steroid – injectable.
(11) Diuretic – injectable.
(12) Medication for postpartum bleeding.
(13) Sodium chloride 0.9% (minimum 250 ml).
(14) Acetyl salicylic acid (aspirin) for oral use.
(15) Oral beta blocker.

Note 1 : *Epinephrine* 1:10,000 *(can be a dilution of epinephrine* 1:1,000)

Note 2 : *The United Nations Conference for the Adoption of a Single Convention on Narcotic Drugs in March,* 1961 *adopted such a Convention, article 32 of which contains special provisions concerning the carriage of drugs in medical kits of aircraft engaged in international flight.*

Oxygen Storage and Dispensing Apparatus

IS : 7.9.1.13—(*a*) The supplemental oxygen supply requirements for non-pressurised aeroplanes are as follows :

(1) An operator shall not operate a non-pressurised aeroplane at pressure altitudes above 10,000 ft unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required, is provided.

(2) The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures, established for each operation in the Operations Manual and with the routes to be flown, and with the emergency procedures specified in the Operations Manual.

(3) An aeroplane intended to be operated above 10 000 ft pressure altitude shall be provided with equipment capable of storing and dispensing the oxygen supplies required.

(4) Oxygen supply requirements.

(i) Flightcrew members. Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with Table 1. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.

(ii) Cabin crew members, additional crew members and passengers. Cabin crew members and passengers shall be supplied with oxygen in accordance with Table 1. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

TABLE 1—SUPPLEMENTAL OXYGEN FOR NON-PRESSURISED AEROPLANES

(*a*)	(*b*)
Supply For:	*Duration And Pressure Altitude*
1. All occupants of flight deck seats on flight deck duty.	Entire flight time at pressure altitudes above 10,000 feet.
2. All required cabin crew members.	Entire flight time at pressure altitudes above 13,000 ft and for any period exceeding 30 minutes at pressure altitudes above 10,000 ft but not exceeding 13,000 ft.
3. 100% of passengers (*see* note).	Entire flight time at pressure altitudes above 13,000 ft
4. 10% of passengers (*see* note)	Entire flight time after 30 minutes at pressure altitudes greater than 10,000 ft but not exceeding 13,000 ft.

Note: For the purpose of this table “passengers” means passengers actually carried and includes infants.

(b) The supplemental oxygen supply requirements for pressurised aeroplanes are as follows :

(1) An operator shall not operate a pressurised aeroplane at pressure altitudes above 10,000 ft unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required by this paragraph, is provided.

(2) The amount of supplemental oxygen required shall be determined on the basis of cabin pressure altitude, flight duration and the assumption that a cabin pressurisation failure will occur at the altitude or point of flight that is most critical from the standpoint of oxygen need, and that, after the failure, the aeroplane will descend in accordance with emergency procedures specified in the Aeroplane Flight Manual to a safe altitude for the route to be flown that will allow continued safe flight and landing.

(3) Following a cabin pressurisation failure, the cabin pressure altitude shall be considered the same as the aeroplane pressure altitude, unless it is demonstrated to the Authority that no probable failure of the cabin or pressurisation system will result in a cabin pressure altitude equal to the aeroplane pressure altitude. Under these circumstances, the demonstrated maximum cabin pressure altitude may be used as a basis for determination of oxygen supply.

(4) Oxygen equipment and supply requirements—

(i) Flight crew members.

(a) Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with Table 2. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.

(b) Flight deck seat occupants, not supplied by the flight crew source, are to be considered as passengers for the purpose of oxygen supply.

(c) Oxygen masks shall be located so as to be within the immediate reach of flight crew members whilst at their assigned duty station.

(d) Oxygen masks for use by flight crew members in pressurised aeroplanes operating at pressure altitudes above 25 000 ft, shall be a quick donning type mask.

(ii) Cabin crew members, additional crew members, and passengers.

(a) Cabin crew members and passengers shall be supplied with supplemental oxygen in accordance with Table 2. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

(b) Aeroplanes intended to be operated at pressure altitudes above 25 000 ft shall be provided sufficient spare outlets and masks and/or sufficient portable oxygen units with masks for use by all required cabin crew members. The spare outlets and/or portable oxygen units are to be distributed evenly throughout the cabin to ensure immediate availability of oxygen to each required cabin crew member regardless of his location at the time of cabin pressurisation failure.

(c) Aeroplanes intended to be operated at pressure altitudes above 25 000 ft shall be provided an oxygen dispensing unit connected to oxygen supply terminals immediately available to each occupant, whenever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10 percent. The extra units shall be evenly distributed throughout the cabin.

(d) Aeroplanes intended to be operated at pressure altitudes above 25 000 ft or which, if operated at or below 25,000 ft, cannot descend safely within four minutes to 13 000 ft, and for which the individual certificate of airworthiness was first issued on or after 9 November 1998, shall be provided with automatically deployable oxygen equipment immediately available to each occupant, wherever seated. The total number dispensing units and outlets shall exceed the number of seats by at least 10 percent. The extra units shall be evenly distributed throughout the cabin.

(e) The oxygen supply requirements, as specified in Table 2, for aeroplanes not certificated to fly at altitudes above 25,000 ft, may be reduced to the entire flight time between 10,000 ft and 13,000 ft cabin pressure altitudes for all required cabin crew members and for at least 10% of the passengers if, at all points along the route to be flown, the aeroplane is able to descend safely within 4 minutes to a cabin pressure altitude of 13,000 ft.

TABLE 2—REQUIREMENTS FOR SUPPLEMENTAL OXYGEN - PRESSURISED AEROPLANE DURING AND FOLLOWING EMERGENCY DESCENT (NOTE)

Supply For :	*Duration and Cabin Pressure Altitude*
1. All occupants of flight deck seats on flight deck duty flight.	Entire flight time when the cabin pressure altitude exceeds 13,000 and entire time when the cabin pressure altitude exceeds 10,000 ft but does not exceed 13,000 ft after the first 30 minutes at those altitudes, but in no case less than: (i) 30 minutes for aeroplanes certificated to fly at altitudes not exceeding 25,000 ft (Note 2) (ii) 2 hours for aeroplanes certificated to fly at altitudes more than 25,000 ft (Note 3).
2. All required cabin crew members.	Entire flight time when cabin pressure altitude exceeds 13,000 ft but not less than 30 minutes (Note 2), and entire flight time when cabin pressure altitude is greater than 10,000 ft but does not exceed 13,000 ft after the first 30 minutes at these altitudes.
3. 100% of passengers.	10 minutes or the entire flight time when the cabin pressure altitude exceeds 13,000 ft whichever is the greater (*Note* 4)
4. 10% of passengers.	Entire flight time when the cabin pressure altitude exceeds 10,000 ft but does not exceed 13,000 ft after the first 30 minutes at these altitudes.

Note 1: T*he supply provided shall take account of the cabin pressure altitude and descent profile for the routes concerned.*

Note 2: *The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 10,000 ft in 10 minutes and followed by 20 minutes at 10,000 ft.*

Note 3: *The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 10,000 ft in 10 minutes and followed by 110 minutes at 10,000 ft. The oxygen required to meet the Crew Protective Breathing Equipment provisions of this Part may be included in determining the supply required.*

Note 4: *The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 15,000 ft.*

Note 5: For the purpose of this table "passengers" means passengers actually carried and includes infants.

(c) The supplemental oxygen supply requirements for non-pressurised helicopters are as follows :

(1) An operator shall not operate a non-pressurised helicopter at pressure altitudes above 10,000 ft unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required, is provided.

(2) The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures, established for each operation in the Operations Manual and with the routes to be flown, and with the emergency procedures specified in the Operations Manual.

(3) A helicopter intended to be operated above 10 000 ft pressure altitude shall be provided with equipment capable of storing and dispensing the oxygen supplies required.

(4) Oxygen supply requirements :

(i) Flight crew members. Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with Table 3. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.

(ii) Cabin crew members, additional crew members and passengers. Cabin crew members and passengers shall be supplied with oxygen in accordance with Table 3. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

TABLE 3—SUPPLEMENTAL OXYGEN FOR NON-PRESSURISED HELICOPTERS

(*a*)	(*b*)
Supply For :	*Duration And Pressure Altitude*
1. All occupants of flight deck seats on flight deck duty.	Entire flight time at pressure altitudes above 10,000 feet.
2. All required cabin crew members.	Entire flight time at pressure altitudes above 13,000 ft and for any period exceeding 30 minutes at pressure altitudes above 10,000 ft but not exceeding 13,000 ft.
3. 100% of passengers (see note).	Entire flight time at pressure altitudes above 13,000 ft.
4. 10% of passengers (see note).	Entire flight time after 30 minutes at pressure altitudes greater than 10,000 ft but not exceeding 13,000 ft.

Note : *For the purpose of this table "passengers" means passengers actually carried and includes infants.*

Cosmic Radiation Detection Equipment.

IS: 7.10.1.13—(*a*) Compliance with the sampling requirements in 7.9.1.32 (*a*)(2)may be accomplished as follows :

(1) The sampling shall be carried out in conjunction with a Radiological Agency or similar organisation acceptable to the Authority.

(2) Sixteen route sectors, which include flight above 15 000 m (49,000 ft), shall be sampled every quarter (three months). Where less than sixteen route sectors which include flight above 15,000 m (49,000 ft) are achieved each quarter, then all sectors above 15,000 m (49,000 ft) shall be sampled.

(3) The cosmic radiation recorded should include both the neutron and non-neutron components of the radiation field.

(4) The results of the sampling, including a cumulative summary quarter on quarter, should be reported to the Authority under arrangements acceptable to the Authority.

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PART 8—OPERATIONS

INTRODUCTION

Part 8 of the Nigeria Civil Aviation Regulations presents regulatory requirements for the operation of aircraft in Nigeria, based upon the requirements of ICAO *Annexes* 2 and 6.

Part 8 prescribes the requirements for operations conducted by airmen certificated in Nigeria while operating aircraft registered in Nigeria, as well as operations of foreign registered aircraft by Nigerian AOC holders, and operations of aircraft within Nigeria by airmen or AOC holders of a foreign State. Part 8 applies to operations outside of Nigeria by all Nigerian pilots and operators unless compliance would result in a violation of the laws of the foreign State in which the operation is conducted.

This Part applies to all aircraft, except where superseded by the more stringent requirements put upon entities engaged in commercial air transport and upon AOC holders.

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NIGERIA CIVIL AVIATION REGULATIONS 2015

PART 8—OPERATIONS

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PART 8—OPERATIONS

8.1. GENERAL

8.1.1.1.—(*a*) Part 8 prescribes the requirements for : Applicability.

(1) Operations conducted by a flight crewmember certified in Nigeria while operating aircraft registered in Nigeria.

(2) Operations of foreign aircraft registered in another State by Nigerian AOC holders.

(3) Operations of aircraft within Nigeria by flight crew or AOC holders of another State.

(*b*) For operations outside of Nigeria, all Nigerian pilots and operators shall comply with these requirements unless compliance would result in a violation of the laws of the State in which the operation is conducted.

Note 1 : Where a particular requirement is applicable only to a particular segment of aviation operations, it will be identified by a reference to those particular operations, such as "*commercial air transport*" or "*small non-turbojet or turbofan aeroplanes*."

Note 2 : Those specific subsections not applicable to operators of other States will include the phrase "*This requirement is not applicable to operators of other States*."

8.1.1.2.—(*a*) For the purpose of Part 8, the following definitions shall apply— Definitions.

(*a*) *Acrobatic Flight*—Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

(*b*) *ADS-C Agreement*—A reporting plan which establishes the conditions of ADC-C data reporting (*i.e*., data required by the air traffic services unit and frequency of ADC-C reports which have to be agreed to prior to using ADC-C in the provision of air traffic services).

Note : The terms of the agreement will be exchanged between the ground system and the aircraft by means of a contract, or a series of contracts.

(*c*) *Advisory Airspace*— An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

(*d*) *Aeroplane.Complex Aeroplane* (*Land*)—An aeroplane that has all the following characteristics: a retractable landing gear, flaps, and a controllable pitch propeller.

Complex Aeroplane (*sea*)—An aeroplane that has all the following characteristics : flaps, and controllable pitch propeller.

(*e*) *Aerial Work*—An aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

(*f*) *Air Navigation Facility*—Any facility used in, available for use in, or designed for use in aid of air navigation, including aerodromes, landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing and take-off of aircraft.

(*g*) *Alternate Aerodrome*—An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing where the necessary services and facilities are available where aircraft performance requirements can be met and which is operational at the expected time of arrival. Alternate aerodromes include the following :

Take-Off Alternate—An alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

En-route Alternate—An alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.

Destination Alternate—An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

(*h*) *Automatic Dependent Surveillance-Broadcast* (*ADS-B*)—A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

(*i*) *Calendar Day*—The period of elapsed time, using Coordinated Universal Time or local time, which begins at midnight and ends 24 hours later in the next midnight.

(*j*) *Check Person*—A qualified person who is authorised by the Authority to conduct an evaluation of either an AOC holders flight crew (pilots, flight engineers, or flight navigators), cabin crew, or flight operations officer. Terms used in this Part include: Check pilot; check flight engineer ; check flight navigator; check cabin crewmember, and check flight operations officer.

(*k*) *Check Person* (*Aircraft*)— A qualified person who is authorised by the Authorityto conduct a flight crew evaluation in an aircraft and in a flight simulator training device for a particular type of aircraft, for a particular AOC holder.

(*l*) *Check Person* (*Simulator*)—A qualified person who is authorised by the Authorityto conduct a flight crew evaluation, but only in a flight simulation training device, for a particular type of aircraft, for a particular AOC holder.

(*m*) *Command and Control Link* (*C*2)—The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

(*n*) *Controlled Flight*—Any flight which is subject to an ATC clearance.

(*o*) *Critical Engine*—The engine whose failure would most adversely affect the performance or handling qualities of an aircraft.

(*p*) *Critical Phases of Flight*—Those portions of operations involving taxiing, takeoff and landing, and all flight operations below 3050 m (10000 ft), except cruise flight.

(*q*) *Cruise Relief Pilot*—A flight crewmember who is assigned to perform pilot tasks during cruise flight to allow the PIC or co-pilot to obtain planned rest.

(*r*) *Cruising Level*—A level maintained during a significant portion of a flight.

(*s*) *Dangerous goods*—Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the ICAO Technical Instructions (see definition below) or which are classified according to those Instructions.

Note : Dangerous goods are classified in *Annex* 18, Chapter 3.

(*t*) *Deadhead Transportation*—Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crewmember's home station.

(*u*) *Decision Altitude* (*DA*) *or Decision Height* (*DH*)—A specified altitude or height in the precision approach at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1 : Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. DA is based on barometric pressure (or QNH-height above sea level) and is used for a CAT I ILS. DH is based on radio altimeter (or QFE-height above aerodrome) and is used for a CAT II and a CAT III ILS.

Note 2 : The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path.

Note 3 : For convenience when both expressions are used they may be written in the form "*decision altitude*/*height*" and abbreviated "*DA*/*H*".

(*v*) *Defined Point After Takeoff*—The point, within the takeoff and initial climb phase, before which the Class 2 helicopter's ability to continue the flight safely with one engine inoperative, is not assured and a forced landing may be required.

(*w*) *Defined Point Before Landing*—The point, within the approach and landing phase, after which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

(*x*) *Detect and Avoid*—The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

(*y*) *Duty Period*—As it related to an air operator, a period which starts when flight or cabin crew personnel are required by an operator to report for or to commence a duty and ends when that person is free from all duties.

(*z*) *Effective length of the runway*—The distance for landing from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centreline of the runway to the far end.

(*dd*)(*aa*) *Extended diversion time operations (EDTO*). —Any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the State of the Operator.

(*ee*)(*bb*) *Extended diversion time operations critical fuel.*—The fuel quantity necessary to fly to an en-route alternate aerodrome considering at the most critical point on the route, the most limiting system failure.

(*ff*)(*cc*) *Extended diversion time operations significant system*.—An aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an extended diversion time operations diversion.

(*gg*)(*dd*) *Extended overwater operation.*—With respect to aircraft other than helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline ; and to helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline and more than 50 nm from an offshore heliport structure.

(*hh*)(*ee*) *Fatigue*.—A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness. Circadian phase, or workload (mental and/or physical activity) that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety related duties.

(*ii*)(*ff*) *Flight*(*s*).—The period from takeoff to landing.

(*jj*)(*gg*) *Flight manual*.—A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions information necessary to the flight crew members for the safe operation of the aircraft.

(*kk*)(*hh*) *Flight operations officer/flight dispatcher*.—A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not , suitably qualified in accordance with *Annex* 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

(*ll*)(*ii*) *Flight duty period*.—The total time from the moment a flight crewmember commences duty, immediately subsequent to a rest period and before making a flight or a series of flights, to the moment the flight crewmember is relieved of all duties having completed such flight or series of flights.

(*mm*)(*jj*) *Flight plan*.—Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft. The term "*flight plan*" is used to mean variously, full information on all items comprised in the flight plan description, covering the whole route of a flight, or limited information required when the purpose is to obtain a clearance for a minor portion of a flight such as to cross an airway, to take off from, or to land at a controlled aerodrome.

(*nn*)(*kk*) *Flight time*.—The period of time that the aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after it is parked at the end of the flight.

(*oo*)(*ll*) *General Aviation Operation*.—An aircraft operation other than a commercial air transport operation or an aerial work operation.

(*pp*)(*mm*) *Instrument Meteorological Conditions*(*IMC*).—Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

(*qq*)(*nn*) *Isolated Aerodrome*. —A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

(*rr*)(*oo*) *Helideck*.—A heliport located on a floating or fixed offshore structure.

(*ss*)(*pp*) Heliport. An aerodrome or defined area on a structure intended to be used wholly or in part for the arrival, departure, and surface movement of helicopters.

(*tt*)(*qq*) Journey log. A form signed by the PIC of each flight that records the aircraft's registration, crewmember names and duty assignments, the type of flight, and the date, place, and time of arrival and departure.

(*uu*)(*rr*) Landing decision point. The point used in determining landing performance from which, an engine failure occurring at this point, the landing may be safely continued or a balked landing initiated.

(*vv*)(*ss*) Line check. A check given to a pilot by a check pilot to evaluate the pilot's operational competency during line operating flight time in an aircraft type he/she is qualified to fly, over a route and area in which the AOC is authorised to operate.

(*ww*)(*tt*) Line operating flight time. Flight time recorded by the PIC or Co-Pilot while in revenue service for an AOC holder.

(*xx*)(*uu*) Master Minimum Equipment List (MMEL). A list established for a particular aircraft type by the manufacturer with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations, or procedures. The MMEL provides the basis for development, review, and approval by the Authority of an individual operator's MEL.

(*yy*)(*vv*) Maximum diversion time. Maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome.

(*zz*)(*ww*) Minimum descent altitude (MDA) or minimum descent height (MDH). A specified altitude or height in a non-precision approach or circling approach below which descent must not be made without the required visual reference.

Note 1 : Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2 : The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3 : For convenience when both expressions are used they may be written in the form "*minimum descent altitude*/*height*" and abbreviated "*MDA*/*H*".

(*aaa*)(*xx*) Obstacle clearance altitude (OCA) or Obstacle clearance height (OCH). The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1. Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

Note 2. For convenience when both expressions are used they may be written in the form "*obstacle clearance altitude*/*height*" and abbreviated "*OCA*/*H*."

(*bbb*)(*yy*) Obstruction clearance plane. A plane sloping upward from the runway at a slope of 1 : 20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plane view, the centreline of the specified area coincides with the centreline of the runway, beginning at the point where the obstruction clearance plane intersects the centreline of the runway and proceeding to a point at least 450 m (1500 ft) from the beginning point. Thereafter, the centreline coincides with the takeoff path over the ground for the runway (in the case of takeoffs) or with the instrument approach counterpart (for landings), or where the applicable one of these paths has not been established, it proceeds consistent with turns of at least 1.2 km (4000 ft) radius until a point is reached beyond which the obstruction clearance plane clears all obstructions. This area extends laterally 60 m (200 ft) on each side of the centreline at the point where the obstruction clearance plane intersects the runway and continues at this width to the end of the runway; then it increases uniformly to 150 m (500 ft) on each side of the centreline at a point 450 m (1500 ft) from the intersection of the obstruction clearance plane with the runway; thereafter, it extends laterally 150 m (500 ft) on each side of the centreline.

(*ccc*)(*zz*) Operational flight plan. The operator's plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations, and relevant expected conditions on the route to be followed and at the aerodromes or heliports concerned.

(*ddd*)(*aaa*) Operator. A person, organisation or enterprise engaged in or offering to engage in an aircraft operation.

Note : In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.

(*eee*)(*bbb*) Passenger exit seats. Those seats having direct access to an exit, and those seats in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit. A passenger seat having "*direct access*" means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.

(*fff*)(*ccc*) Remote pilot. A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

(*ggg*)(*ddd*) Remote pilot station. The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

(*hhh*)(*eee*) Remotely piloted aircraft (RPA). An unmanned aircraft which is piloted from a remote pilot station.

(*iii*)(*fff*) Remotely piloted aircraft system (RPAS). A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

(*jjj*)(*ggg*) Rest period. A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

(*kkk*)(*hhh*) Point of no return. The last possible geographic point at which an aeroplane can proceed to the destination aerodrome as well as to an available en route alternate aerodrome for a given flight.

(*lll*)(*iii*) RPA observer. A trained and competent person designed by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

(*mmm*)(*jjj*) Takeoff decision point. The point used in determining takeoff performance of a Class 1 helicopter from which, an engine failure occurring at this point, either a rejected takeoff may be made or a takeoff safely continued.

(*nnn*)(*kkk*) Threshold time. The range, expressed in time, established by the State of the Operator to an en-route alternate aerodrome, whereby any time beyond requires an extended diversion time operation approval from the State of the Operator.

(*ooo*)(*lll*) Visual line-of-sight (VLOS) operation. An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft.

8.1.1.3.—(*a*) The following abbreviations are used in Part 8 : Abbreviations.

1.	AAC	All Aircraft
2.	AFM	Aeroplane Flight Manual.
3.	AGL	Above Ground Level.
4.	AMSL	Above Mean Sea Level.
5.	AMT	Aviation Maintenance Technician.
6.	AOC	Air Operator Certificate.
7.	AOM	Aircraft Operating Manual.
8.	APU	Auxiliary Power Unit.
9.	ATC	Air Traffic Control.
10.	CAT	Category.
11.	C2	Command and Control Link.
12.	CDL	Configuration Deviation List.
13.	CP	Copilot.
14.	CRM	Crew Resource Management.
15.	CRT	Cathode Ray Tube
16.	DH	Decision Height.
17.	ETA	Estimated Time of Arrival.
18.	EDTO	Extended Diversion Time Operations.
19.	FAS	Final Approach Segment
20.	FE	Flight Engineer.
21.	FL	Flight Level.
22.	FN	Flight Navigator.
23.	FOCC	Flight Operations Clearance Certificate
24.	FRMS	Fatigue Risk Management System
25.	FSTD	Flight Simulation Training Device
26.	GPS	Global Positioning System.
27.	IA	Inspection Authorisation.
28.	IFR	Instrument Flight Rules.
29.	IMC	Instrument Meteorological Conditions.
30.	INS	Inertial Navigation System.
31.	LDA	Localizer-type Directional Aid.
32.	LOC	Localizer.
33.	LORAN	Long-range Navigation.

34.	LVTO	Low Visibility Take Off.
35.	MCC	Maintenance Clearance Certificate
36.	MDA	Minimum Decent Altitude.
37.	MEA	Minimum En Route Altitude.
38.	MEL	Minimum Equipment List.
39.	MMEL	Master Minimum Equipment List.
40.	MNPS	Minimum Navigation Performance Specifications.
41.	MOCA	Minimum Obstruction Clearance Altitude.
42.	MSL	Mean Sea Level.
43.	NM	Nautical Miles.
44.	NOTAM	Notice to Airmen.
45.	OCA	Obstacle Clearance Altitude
46.	OCH	Obstacle Clearance Height
47.	OCA/H	Obstacle Clearance Altitude/Height
48.	PIC	Pilot in Command.
49.	PBE	Protective Breathing Equipment.
50.	RFFS	Rescue and Fire Fighting Service
51.	RFM	Rotorcraft Flight Manual.
52.	RPA	Remotely Piloted Aircraft.
53.	RPAS	Remotely Piloted Aircraft System.
54.	RVR	Runway Visual Range.
55.	RVSM	Reduced Vertical Separation Minimum.
56.	SCCM	Senior Cabin Crewmember.
57.	SDF	Simplified Directional Facility.
58.	SM	Statute Miles.
59.	TACAN	Tactical Air Navigation System.
60.	VFR	Visual Flight Rules.
61.	VLOS	Visual Line-Of-Sight
62.	VMC	Visual Meteorological Conditions.
63.	VSM	Vertical Separation Minimum.
64.	V1	Takeoff decision speed.
65.	Vmo	Maximum operating speed.
66.	Vso	Stalling speed or the minimum steady flight speed in the landing configuration.

8.2. General Operations Requirements

8.2.1. Aircraft Requirements.

8.2.1.1.—(*a*) No person may operate a Nigeria-registered aircraft unless it is displays the proper markings prescribed in Part 4. Registration Markings.

8.2.1.2.—(*a*) No person may operate a civil aircraft unless it is in an airworthy condition. Civil Aircraft Airworthiness.

(*b*) Each PIC shall determine whether an aircraft is in a condition for safe flight.

(*c*) The PIC shall discontinue a flight as soon as practicable when an unairworthy mechanical, electrical, or structural condition occurs.

8.2.1.3. Special Airworthiness Certificate Operational Restrictions.

(*a*) No person may operate an aircraft with a special airworthiness certificate except as provided in the limitations issued with that certificate.

8.2.1.4.—(*a*) No person may operate an aircraft unless it is equipped with the required instruments and navigation equipment appropriate to type of flight operation conducted and the route being flown. Aircraft Instruments and Equipment.

Note : The instruments and equipment required for specific operations are listed in Part 7.

8.2.1.5.—(*a*) No person may takeoff in an aircraft with inoperative instruments or equipment installed, except as authorised by the Authority. Inoperative Instruments and Equipment.

(*b*) An AOC Holder shall not operate a multi-engine aircraft with inoperative instruments and equipment installed unless the following conditions are met :

(1) An approved MEL exists for that aircraft.

(2) The Authority has issued the AOC Holder operations specifications authorising operations in accordance with an approved MEL. The flightcrew shall have direct access at all times before flight to all of the information contained in the approved MEL through printed or other means approved by the Authority in the AOC Holder specific operating provisions. An approved MEL, as authorised by the specific operating provisions, constitutes an approved change to the type design without requiring recertification.

(*c*) The approved MEL must :

(1) Be prepared in accordance with the limitations specified in paragraph (*c*) of this section.

(2) Provide for the operation of the aircraft with certain instruments and equipment in an inoperative condition.

(3) Records identifying the inoperative instruments and equipment and the information required by paragraph (*b*)(3)(*ii*) of this section must be available to the pilot.

(4) The aircraft is operated under all applicable conditions and limitations contained in the MEL and the operations specifications authorising use of the MEL.

(*d*) The following instruments and equipment may not be included in the MEL :

(1) Instruments and equipment that are either specifically or otherwise required by the airworthiness requirements under which the aircraft is type certificated and which are essential for safe operations under all operating conditions.

(2) Instruments and equipment required by an airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.

(3) Instruments and equipment required for specific operations under Part 7, Part 8, and/or Part 9 of these regulations.

(*e*) Notwithstanding paragraphs (*c*)(1)and (*c*)(3) of this section, an aircraft with inoperative instruments or equipment may be operated under a special flight permit under 5.4.1.11 of these regulations.

(*f*)In situations where no master minimum equipment list (MMEL) is available and no MEL is required for the specific aircraft operation under these regulations, flight operations with inoperative instruments and equipment installed may commence provided the following conditions are met.

(*g*) The inoperative instruments and equipment may not be—

(1) Part of the VFR-day instruments and equipment prescribed in Part 7 ;

(2) Required on the aircraft's equipment list or the operations equipment list for the kind of flight operation being conducted ;

(3) Required by Part 7 for the specific kind of flight operation being conducted ; or

(4) Required to be operational by an airworthiness directive.

Note : If deactivation of the inoperative instrument or equipment involves maintenance, it must be accomplished and recorded in accordance with Part 5.

(*h*) To be eligible for these provisions, the inoperative instruments and equipment shall be—

(1) Determined by the PIC not to be a hazard to safe operation ;

(2) Deactivated and placarded Inoperative ; and

(3) Removed from the aircraft, the flight deck control placarded and the maintenance recorded in accordance with Part 5.

Note : The required instruments and equipment for specific operations are listed in Part 7.

8.2.1.6. Civil Aircraft Flight Manual, Marking and Placard Requirements.

(*a*) No person may operate a Nigeria-registered civil aircraft unless there is available in the aircraft—

(1) A current, approved AFM or RFM ; or

(2) An AOM approved by the Authority for the AOC holder ;

(3) If no AFM or RFM exists, approved manual material, markings and placards, or any combination thereof, which provide the PIC with the necessary limitations for safe operation.

(*b*) No person may operate a civil aircraft within or over Nigeria without complying with the operating limitations specified in the approved AFM or RFM, markings and placards, or as otherwise prescribed by the certifying authority for the aircraft's State of Registry.

(*c*) Each AFM or RFM shall be updated by implementing changes made mandatory by the State of Registry.

(*d*) Each operator shall display in the aircraft all placards, listings, instrument markings or combination thereof, containing those operating limitations prescribed by the certifying Authority for the aircraft's State of Registry for visual presentation.

Required Aircraft And Equipment Inspections.

8.2.1.7.—(*a*) Unless otherwise authorised by the Authority, no person may operate a Nigeria Civil Aircraft unless it has had the appropriate inspections required by Subpart 8.3.

Documents to be Carried on Aircraft-all Operations.

8.2.1.8.—(*a*) Except as provided in 8.2.1.6, no person may operate a civil aircraft in commercial air transport operations unless it has within it the following current and approved documents :

(1) Certificate of Aircraft Registration issued to the owner.

(2) Certificate of Airworthiness.

(3) Aircraft Journey Log.

(4) Aircraft Radio Licence.

(5) List of passenger names and points of embarkation and destination, if applicable.

(6) Cargo manifest including special loads information.

(7) Aircraft Technical Log.

(8) A certified true copy of the AOC.

(9) Noise Certificate, if required.

(10) AFM or RFM, for aeroplanes or helicopters.

(11) Part(s) of the Operations Manual relevant to operation(s) conducted.

(12) MEL.

(13) Category II or III Manual, as applicable.

(14) Operational Flight Plan, for all international flights.

(15) Filed ATC flight plan.

(16) NOTAM/ briefing documentation.

(17) Meteorological information.

(18) Mass and balance documentation.

(19) Roster of special situation passengers.

(20) Maps and charts for routes of proposed flight or possibly diverted flights.

(21) Forms for complying with the reporting requirements of the Authority and the AOC holder.

(22) For international flights, a general declaration for customs.

(23) Any documentation that may be required by the Authority or States concerned with a proposed flight.

(24) The appropriate licences for each member of the flightcrew.

(25) Copy of the release to service, if any, in force with respect to the aircraft.

(26) Search and rescue information, for international flights

(*b*) Except as provided in 8.2.1.6, no person may operate a civil aircraft in general aviation operations or aerial work operations unless it has within it the following current and approved documents :

(1) Certificate of Aircraft Registration issued to the owner.

(2) Certificate of Airworthiness.

(3) Aircraft Journey Log.

(4) Aircraft Radio License, for international flights.

(5) List of passenger names and points of embarkation and destination, if applicable.

(6) Cargo manifest including special loads information.

(7) The appropriate licences for each member of the flight crew.

(8) Copy of the release to service, if any, in force with respect to the aircraft, or technical log, as applicable.

(9) Noise certificate, if required.

(10) AFM or RFM, for aeroplanes or helicopters.

(11) Category II or III Manual, as applicable.

(12) Operational Flight Plan, for all international flights.

(13) NOTAM/ briefing documentation.

(14) Maps and charts for routes of proposed flight or possibly diverted flights.

(15) Forms for complying with the reporting requirements of the Authority.

(16) For international flights, a general declaration for customs.

(17) Aerial work certificate for aerial work operators.

(18) Search and rescue information, for international flights.

(19) Any documentation that may be required by the Authority or States concerned with a proposed flight.

Note : “*Special situation passengers*” includes armed security personnel, deportees, persons in custody, and persons with special medical needs.

Operations of Foreign-Registered General Aviation Aircraft.

8.2.1.9.—(*a*) No person shall operate a foreign-registered aircraft in general aviation in Nigeria except in accordance with the terms and conditions of the Flight Operations Clearance Certificate (FOCC) and the Maintenance Clearance Certificate (MCC) issued by the Authority and in force in respect of that aircraft.

(*b*) The FOCC and MCC shall be issued for a period not exceeding six (6) months.

(*c*) The FOCC and MCC will be renewed only once for a maximum period of six (6) months.

8.3. AIRCRAFT MAINTENANCE AND INSPECTION REQUIREMENTS

Applicability.

8.3.1.1.—(*a*) This Subpart prescribes the rules governing the maintenance and inspection of Nigeria registered civil aircraft operating within or outside Nigeria.

(*b*) Where any aircraft, not registered in Nigeria and operating under an inspection programme approved or accepted by the State of Registry, does not have the equipment required by Nigeria for operations within Nigeria, the owner/operator shall ensure that such equipment is installed and inspected in accordance with the requirements of the State of Registry, acceptable to the Authority before operation of that aircraft in Nigeria.

(*c*) Annual inspections in 8.3.1.4 and Annual Inspections plus 100 hour inspections in Subsection 8.3.1.4 do not apply to—

(1) An aircraft that carries a special flight permit, a current experimental certificate, or a provisional airworthiness certificate ;

(2) An aircraft subject to the requirements of progressive inspections in Subsection 8.3.1.5 ;

(3) An aircraft subject to the requirements of a continuous airworthiness maintenance inspections in Subsection 8.3.1.6 ; and

(4) A large aeroplane, a turbine-powered multi-engine aeroplane and a turbine-powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with continuous airworthiness maintenance inspections in Subsection 8.3.1.6.

General.

8.3.1.2—(*a*) The registered owner or operator of an aircraft is responsible for maintaining that aircraft in an airworthy condition, including compliance with all airworthiness directives.

(*b*) No person may perform maintenance, preventive maintenance, or alterations on an aircraft other than as prescribed in this subpart and other applicable regulations, including Part 5.

(*c*) No person may operate an aircraft for which a manufacturer's maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitations section unless the mandatory replacement times, inspection intervals and related procedures set forth in operations specifications approved by the Authority under Part 9 for AOC holders, or in accordance with an inspection programme approved under this subsection are complied with.

(*d*) The owner or operator shall use one of the following inspection programmes as appropriate for the aircraft and the type operation :

(1) Annual inspection ;

(2) Annual/100 hour inspection ;

(3) Progressive ; or

(4) Continuous airworthiness maintenance programme.

(*e*) No aircraft shall be approved for return to service after inspection unless the replacement times for life-limited parts specified in the aircraft specification-type data sheets are complied with and the aircraft, including airframe, engines, propellers, rotors, appliances, and survival and emergency equipment, is inspected in accordance with the selected inspection programme.

(*f*) Each person wishing to establish or change an approved inspection programme shall submit the programme for approval by the Authority and shall include in writing-

(1) Instructions and procedures for the conduct of inspection for the particular make and model aircraft, including necessary tests and checks. The instructions shall set forth in detail the parts and areas of the aeronautical products, including survival and emergency equipment required to be inspected ; and

(2) A schedule for the inspections that shall be performed expressed in terms of time in service, calendar time, number of system operations or any combination of these.

(*g*) When an operator changes from one inspection programme to another, the operator shall apply the time in service, calendar times, or cycles of operation accumulated under the previous programme, in determining when the inspection is due under the new programme.

Annual Inspections.

8.3.1.3.—(*a*) An annual inspection programme may be used for non-complex aircraft with a maximum certificated take-off mass of less than 5700 kg (aeroplanes)/3,175 kg (helicopters) that are not used for compensation or hire.

(*b*) An annual inspection under this paragraph may be performed by an AMT holding an IA in accordance with Part 2 or an AMO.

(*c*) No person may operate an aircraft unless, within the preceding 12 calendar-months, the aircraft has had—

(1) An annual inspection in accordance with Part 5 and has been approved for return to service by an AMT holding an IA issued in accordance with Part 2 or an AMO certificated in accordance with Part 6, or.

(2) An inspection for the issuance of an airworthiness certificate completed by the Authority in accordance with Part 5.

Annual/100 Hour Inspections.

8.3.1.4.—(*a*) No person may operate a non-complex aircraft with a certificated maximum take-off mass less than 5700 kg (aeroplanes)/3,175kg (helicopters) carrying any person (other than a crewmember) for compensation or hire, and no person may give flight instruction for compensation or hire in an aircraft which that person provides, unless—

(1) Within the preceding 100 hours of time in service the aircraft has received an annual or a 100-hour inspection, and

(2) Been approved for return to service in accordance with Part 5 of these regulations.

(*b*) The 100-hour limitation may be exceeded by not more than 10 hours while en route to reach a place where the inspection can be done. The excess time used to reach a place where the inspection can be done must be included in computing the next 100 hours of time in service.

(*c*) An annual inspection under this paragraph may be performed and released to service by an AMT holding an IA issued in accordance with Part 2 or an AMO certificated in accordance with Part 6.

(*d*) A 100-hour inspection under this paragraph may be performed and released to service by an AMT holding an IA issued in accordance with Part 2 or an AMO certificated in accordance with Part 7.

Progressive Inspections.

8.3.1.5.—(*a*) A progressive inspection programme may be used for aircraft with a maximum certificated take-off mass of less than 5700 kg (aeroplanes)/3,175kg (helicopters)

(*b*) Aircraft inspected under a progressive inspection programme may be used for aircraft engaged in compensation or hire.

(*c*) Progressive inspection. Each registered owner or operator of an aircraft desiring to use a progressive inspection programme shall submit a written request to the Authority, and shall provide—

(1) An AMT holding an IA in accordance with Part 2, an AMO appropriately rated in accordance with Part 6, or the manufacturer of the aircraft to supervise or conduct the progressive inspection ;

(2) A current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail—

(*i*) An explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material ;

(*ii*) An inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en-route and for changing an inspection interval because of service experience.

(*iii*) Sample routine and detailed inspection forms and instructions for their use ; and

(*iv*) Sample reports and records and instructions for their use ;

(3) Enough housing and equipment for necessary disassembly and proper inspection of the aircraft ; and

(4) Appropriate current technical information for the aircraft.

(*d*) The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar-months and be consistent with the current manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged.

(*e*) The progressive inspection schedule shall ensure that the aircraft, at all times, will be airworthy and will conform to all applicable aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data acceptable to the Authority.

(*f*) Each owner/operator shall include in the inspection programme the name and address of the person responsible for the scheduling of the inspections required by the programme and provide a copy of the programme to the person performing inspection on the aircraft.

(*g*) If the progressive inspection is discontinued, the owner or operator shall immediately notify the Authority, in writing, of the discontinuance.

(1) After the discontinuance, the first annual inspection under Part 8 is due within 12 calendar-months after the last complete inspection of the aircraft under the progressive inspection.

(2) The 100-hour inspection is due within 100 hours after that complete inspection.

(3) A complete inspection of the aircraft, for the purpose of determining when the annual and 100 hour inspections are due, requires a detailed inspection of the aircraft and all its components in accordance with the progressive inspection.

(4) A routine inspection of the aircraft and a detailed inspection of several components are not considered to be a complete inspection.

Continuous Airworthiness Maintenance Inspection.

8.3.1.6.—(*a*) The registered owner or operator of each large aeroplane certificated with a maximum take-off mass of over 5700 kg , turbine-powered multi-engine aeroplane, and turbine-powered rotorcraft shall select, identify in the aircraft maintenance records, and use one of the following continuous airworthiness maintenance inspection programmes for the inspection of the aircraft—

(1) A current inspection programme recommended by the manufacturer ;

(2) A continuous airworthiness maintenance programme for that make and model of aircraft currently approved by the Authority for use by an AOC holder ; or

(3) Any other inspection programme established by the registered owner or operator of that aircraft and approved by the Authority.

(*b*) Each owner/operator shall include in the selected inspection programme the name and address of the person responsible for the scheduling of the inspections required by the programme and provide a copy of the programme to the person performing inspection on the aircraft.

Note : The aircraft manufacturer's inspection programme and any other inspection programme approved by the Authority, will specify who can perform aircraft maintenance, inspections and return of the aircraft to service.

Changes to Aircraft Maintenance Inspection Programmes.

8.3.1.7.—(*a*) Whenever the Authority finds that revisions to an approved inspection programme are necessary for the continued adequacy of the programme, the owner or operator shall, after notification by the Authority, make any changes in the programme found to be necessary.

(*b*) The owner or operator may petition the Authority to reconsider the notice, within 30 days after receiving that notice.

(*c*) Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Authority.

8.3.1.8.—(*a*) Each owner or operator of an aircraft shall— Required Mainte-nance.

(1) Have that aircraft inspected as prescribed in Part 8.3 and discrepancies repaired as prescribed in the Performance Rules of Part 5 ;

(2) Repair, replace, remove, or inspect any inoperative instruments or items of equipment at the next required inspection, except when permitted to be deferred under the provisions of a Minimum Equipment List (MEL) ;

(3) Ensure that a placard has been installed on the aircraft when listed discrepancies include inoperative instruments or equipment ; and

(4) Ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.

8.3.1.9.—(*a*) Except for records maintained by an AOC holder, each registered owner or operator shall retain the following records until the work is repeated or superseded by other work of equivalent scope and detail— Maintenance and Inspection Records Retention.

(1) Records of the maintenance, preventive maintenance, minor modifications, and records of the 100-hour, annual, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft to include—

(*i*) A description (or reference to data acceptable to the Authority) of the work performed,

(*ii*) The date of completion of the work performed ; and

(*iii*) The signature and certificate number of the person approving the aircraft for return to service.

(2) Records containing the following information—

(*i*) The total time-in-service of the airframe, each engine, each propeller, and each rotor ;

(*ii*) The current status of all life-limited aeronautical products ;

(*iii*) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis ;

(*iv*) The current inspection status of the aircraft, including the time since the last inspection required by the inspection programme under which the aircraft and its appliances are maintained ;

(*v*) The current status of applicable Airworthiness Directives including, for each, the method of compliance, the Airworthiness Directive number, and revision date. If the Airworthiness Directive involves a recurring action, include the time and date when the next action is required.

(*vi*) Copies of the forms prescribed by this chapter for each major modification to the airframe and currently installed engines, rotors, propellers, and appliances.

(*b*) The records specified in paragraph (*a*) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold or leased.

(*c*) A list of defects shall be retained until the defects are repaired and the aircraft is approved for return to service.

(*d*) The owner or operator shall make all maintenance records required by this subsection available for inspection by the Authority.

(*e*) The records in 8.3.1.9(*a*) shall be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service and the records in 8.3.1.9.

(*f*) For a minimum period of one year after the signing of the maintenance release.

Note : Maintenance records for an AOC holder are in Part 9 : 9.4.1.8.

Lease or Sale of Aircraft-Transfer of Maintenance Records.

8.3.1.10.—(*a*) Any owner or operator who sells or leases a Nigeria-registered aircraft shall transfer to the purchaser/lessor, at the time of sale or lease, the records identified in § 8.3.1.9 of that aircraft, in plain language form or in coded form at the election of the purchaser/lessor if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Authority.

Modifications and Repairs.

8.3.1.11.—(*a*) All modifications and repairs shall comply with airworthiness requirements acceptable to the State of Registry. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

8.4. FLIGHTCREW REQUIREMENTS

Composition of the Flightcrew.

8.4.1.1.—(*a*) The number and composition of the flight crew may not be less than that specified in the flight manual or other documents associated with the airworthiness certificate.

(*b*) Where radio equipment is installed in the aircraft, the flight crew shall include at least one member who holds a valid radio licence authorising operation of the type of radio transmitting equipment to be used.

(*c*) When navigation necessary for the safe operation of the aeroplane cannot be accomplished from the pilot's station the flight crew shall include a member who holds a flight navigator licence.

(*d*) A co-pilot (CP) is required for IFR commercial air transport operations, unless the Authority has issued an exemption in accordance with the exemption process in Part 1 of these regulations, for the use of an autopilot in lieu of a co-pilot. This exemption shall be for domestic operations only and aeroplanes weighting less than 5700 kg or helicopters weighting less than 3,175 kg.

(*e*) When a separate flight engineer's station is incorporated in the design of an aeroplane and the flight engineer function cannot be accomplished from the pilot's station by a pilot who holds a flight engineer licence without interference with regular duties, the flight crew shall include at least one crewmember who holds a flight engineer licence especially assigned to that station.

Flightcrew Qualifications.

8.4.1.2.—(*a*) The PIC shall ensure that the licences of each flight crewmember have been issued or rendered valid by the State of Registry, contain the proper ratings, and that all that the flight crewmembers has maintained recency of experience.

(*b*) No person may operate a civil aircraft in commercial air transport or aerial work unless that person is qualified for the specific operation and in the specific type of aircraft used.

(*c*) The owner or operator of an aircraft shall ensure that the flight crewmembers demonstrate the ability to speak and understand the English language used for radiotelephony communications and for international operations.

Authorisation in Lieu of a Type Rating.

8.4.1.3.—(*a*) The Authority may authorise a pilot to operate an aircraft requiring a type rating without a type rating for up to 60 days, provided—

(1) The Authority has determined that an equivalent level of safety can be achieved through the operating limitations on the authorisation ;

(2) The applicant shows that compliance with this subsection is impracticable for the flight or series of flights ;

(3) The operations—

(*i*) Involve only a ferry flight, training flight, test flight, or skill test for a pilot licence or rating ;

(*ii*) Are within (Nigeria), unless, by previous agreement with the Authority of the other State, the aircraft is flown to an adjacent contracting State for maintenance ;

(*iii*) Are not for compensation or hire unless the compensation or hire involves payment for the use of the aircraft for training or taking a skill test ; and

(*iv*) Involve only the carriage of crewmembers considered essential for the flight.

(4) If the purpose of the authorisation provided by this paragraph cannot be accomplished within the time limit of the authorisation, the Authority may authorise an additional period of up to 60 days.

Licences Required.

8.4.1.4.—(*a*) Except as provided for in Subsection 8.4.1.3, no person may act as PIC or in any other capacity as a required flight crewmember of a civil aircraft of :

(1) Nigeria registry, unless he or she carries in his or her personal possession the appropriate and current licence for that flightcrew position for that type of aircraft and a valid medical certificate ;

(2) Foreign registry, unless he or she carries in his or her personal possession a valid and current licence for that type of aircraft issued or validated by the State in which the aircraft is registered.

Flightcrew-Limitations on use of Services for Commercial air Transport.

8.4.1.5.—(*a*) No person may serve as a flight crewmember, nor may any AOC holder use a flight crewmember in commercial air transport unless that person is otherwise qualified for the operations for which he or she is to be used.

(*b*) The qualifications, training and proficiency checking for flight crewmembers engaged in commercial air transport operations are provided in Subpart 8.10.

(*c*) The recency and proficiency requirements for flight crewmembers engaged in commercial air transport operations are listed in paragraphs 8.4.1.10 -8.4.1.14.

Note : The qualifications for flight crewmembers engaged in commercial air transport are provided in Subpart 8.10.

Rating Required for IFR Operations.

8.4.1.6—(*a*) No person may act as pilot of a civil aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless-

(1) The pilot holds an instrument rating or an ATP licence with an appropriate aircraft category, class, and type (if required) rating for the aircraft being flown ;

(2) In the case of helicopter, the pilot holds a helicopter instrument rating ;

8.4.1.7.—(*a*) Except as shown in paragraph (b), no person may act as a pilot crew member of a civil aircraft in a Category II/III operation unless-

Special Authorisation Required for Category II/ III Operations.

(1) In the case of a PIC, he or she holds a current Category II or II pilot authorization issued by the State of Registry for that aircraft type.

(2) In the case of a CP, he or she is authorized by the State of Registry to act as CP in that aircraft type in Category II/III operations.

(*b*) An authorisation is not required for individual pilots of an AOC holder that has operations specifications approving Category II or III operations.

8.4.1.8.—(*a*) Each pilot shall show the aeronautical training and experience used to meet the requirements for a licence or rating, or recency of experience, by a reliable record.

Pilot Logbooks.

(*b*) Each PIC shall carry his or her logbook on all general aviation international flights.

(*c*) A student pilot shall carry his or her logbook, including the proper flight instructor endorsements, on all solo cross-country flights.

Note : The acceptable methods of logging experience are outlined in Part 2-Personnel Licensing.

8.4.1.9.—(*a*) The recency and proficiency requirements for general aviation operations are listed in Part 2.3.1.6.

Pilot Recency and Proficiency-General Aviation Operations.

8.4.1.10.—(*a*) No person may act as PIC or co-pilot of an aircraft carrying passengers unless, within the preceding 90 days that pilot has :

Pilot Recency-Takeoff and Landings, Commercial air Transport Operations.

(1) Made 3 takeoffs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and if a type rating is required, of the same type or in a flight simulation training device approved for the purpose.

(2) For a tailwheel aeroplane, made the 3 takeoffs and landings in a tailwheel aeroplane with each takeoff and landing to a full stop.

(3) For night operations, made the 3 takeoffs and landings required by paragraph (a)(1) at night with each takeoff and landing to a full stop.

(*b*) A pilot who has not met the recency of experience for takeoffs and landings shall satisfactorily complete a requalification curriculum acceptable to the Authority.

(*c*) Requirements of paragraphs (*a*) and (*b*) may be satisfied in a flight simulator approved by the Authority.

Pilot Recency-IFR Operations.

8.4.1.11.—(*a*) No person may act as a pilot under IFR, nor in IMC, unless he or she has, within the past 12 calendar-months-

(1) Logged at least 6 hours of instrument flight time including at least 3 hours in flight in the category of aircraft ; and

(2) Completed at least 6 instrument approaches.

(*b*) A pilot who has completed an instrument proficiency check with an authorised representative of the Authority retains currency for IFR operations for 12 calendar-months following that check.

Pilot Recency Cruise Relief Pilot.

8.4.1.12.—(*a*) No person may act as a cruise relief pilot in commercial air transport unless within the preceding 90 days, that pilot has either :

(1) Operated as pilot-in-command, co-pilot or cruise relief pilot on the same type of aircraft ; or

(2) Carried out flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aircraft or in a flight simulator approved for the purpose, and has practised approach and landing procedures, where the approach and landing procedure practice may be performed as the pilot who is not flying the aircraft.

(*b*) When a cruise relief pilot is flying several variants of the same type of aircraft or different types of aircraft with similar characteristics in terms of operating procedures, systems, and handling, the recency or refresher training may be combined, if approved by the Authority.

Pilot Recency-Night Vision Goggles.

8.4.1.13.—(*a*) No person may act as PIC in a night vision goggle operation unless that pilot has completed the required training in Part 2.3.2.9, and has performed and logged the following tasks as the sole manipulator of the controls on a flight during a night vision goggle operation, within the preceding 60 days to carry passengers on board, or within the preceding 120 days to act as PIC without passengers on board :-

(1) 3 takeoffs and landings, with each takeoff and landing including a climb out, cruise, descent, and approach phase of flight, if the pilot intends to use night visions goggles during the takeoff and landing phase of flight ;

(2) 3 hovering tasks, if the pilot intends to use night vision goggles when operating helicopters or powered- lifts during the hovering phase ;

(3) 3 area departure and area arrival tasks ;

(4) 3 tasks of transitioning from aided night flight to unaided night flight and back to aided night flight.

(5) 3 night vision goggle operations, or when operating helicopters or powered-lifts, 6 night vision goggle operations, or

(*b*) Successfully completed the night vision goggles proficiency check required in Part 2.3.2.9, with the Authority or an authorised representative of the Authority.

Pilot Proficiency-Commercial Air Transport Operations.

8.4.1.14.—(*a*) The qualification, training and proficiency checking requirements for flight crewmembers engaged in commercial air transport are listed in Subsection 8.10. Additionally, the following requirements in (*b*)-(*c*) shall be met, as applicable.

(*b*) All pilots. No person shall act as a pilot of an aircraft unless he or she has successfully passed two proficiency checks within months, conducted by an authorised representative of Authority. The proficiency check requirement—

(1) Shall ensure that piloting technique and the ability to execute emergency procedures is checked in such a way as to demonstrate the pilot's competence on each type or variant of a type of aircraft, including where the operations may be conducted under IFR ;

(2) Shall not be satisfied by the conduct of two checks that are similar and which occur within a period of four consecutive months

(3) May be combined for several variants of the same type of aircraft or different types of aircraft with similar characteristics in terms of operating procedures, systems and handling, if approved by the Authority.

(*c*) Single pilot operations. No person shall act as PIC of an aircraft unless he or she has completed the following proficiency requirement in the class of aeroplane in an environment representative of the operation :

(1) For operations under the IFR or at night, have accumulated at least 50 hours flight time on the class of aeroplane, of which at least 10 hours shall be as PIC ;

(2) For operations under the IFR, have accumulated at least 25 hours flight time under the IFR on the class of aeroplane, which may form part of the 50 hours flight time in (1) above ;

(3) For operations at night, have accumulated at least 15 hours flight time at night, which may form part of the 50 hours flight time in (1) above ; and

(4) Have successfully completed training programmes that include, in addition to the operator's training programme, passenger briefing with respect to emergency evacuation, autopilot management, and the use of simplified in-flight documentation.

(*d*) The aircraft pilot proficiency check and the instrument proficiency check must be accomplished by the Authority or an authorised representative of the Authority in the category, class and type of aircraft to be operated, or in a flight simulation training device approved for the purpose, to the requirements in Part 8 : 8.10.1.20 and IS: 8.10.1.20 and the applicable skill test in Nig. CARs.

(*e*) Night vision goggles operation. No person may act as PIC in a night vision goggle operation unless, the pilot has completed the required training in Part 2 : 2.3.2.9, and meets either the :

(1) Currency requirements in paragraph 8.4.1.13(*a*) above, or

(2) Passes the night vision goggles proficiency check required by paragraph 8.4.1.13(*b*) above with the Authority or an authorised representative of the Authority.

Pilot Privileges and Limitations.

8.4.1.15.—(*a*) A pilot may conduct operations only within the general privileges and limitations of each licence, rating or authorisation as specified in Part 2 of these regulations.

Operation on More than One Aircraft Type or Variant.

8.4.1.16.—(*a*) No flight crew member may operate on more than two aircraft types or variants.

(*b*) An operator shall ensure that a flight crew member does not operate on more than one aircraft type or variant unless the flight crew member is competent to do so.

(*c*) The operator shall ensure that the differences and/or similarities of the aircraft concerned justify such operations, taking into account the following :

(*i*) the level of technology ;

(*ii*) operational procedures ;

(*iii*) handling characteristics.

(*d*) An operator shall specify appropriate procedures and/or operational restrictions, approved by the Authority, in the Operations Manual, for any operation on more than one aircraft type or variant covering :

(*i*) the flight crew members' minimum experience level ;

(*ii*) the minimum experience level on one type or variant before beginning training for and operation of another type or variant ;

(*iii*) the process whereby flight crew qualified on one type or variant will be trained and qualified on another type or variant ;

(*iv*)all applicable recent experience requirements for each type or variant.

(*e*) Before exercising the privileges of two aircraft types or variants :

(*i*)flight crew members must have completed two consecutive proficiency checks and must have 500 hours in the relevant crew position ;

(*ii*)only one aircraft type or variant may be flown in any one flight duty period ;

(*iii*)before commencing training for and operation of another aircraft type or variant, flight crew members must have completed three(3) months and 150 hours flying on the base aircraft, and this must include at least one proficiency check ;

(*iv*)after completion of the initial line check on the new aircraft type or variant, 50 hours flying or 20 sectors must be achieved solely on aircraft of the new type rating.

8.5. CREWMEMBER DUTIES AND RESPONSIBILITIES

8.5.1.1. Authority and Responsibility of the PIC.

(*a*) The PIC shall be responsible for the operations and safety of the aircraft and for the safety of all persons on board, during flight.

(*b*) The PIC of an aircraft shall have final authority as to the operation of the aircraft while he or she is in command.

(*c*) The PIC of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the PIC may depart from these rules in emergency circumstances that render such departure absolutely necessary in the interests of safety.

(*d*) The pilot-in-command of an aeroplane equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collision.

8.5.1.2. Compliance with Local Regulations.

(*a*) The PIC shall comply with the relevant laws, regulations and procedures of the States in which the aircraft is operated.

(*b*) If an emergency situation which endangers the safety of the aircraft or persons necessitates the taking of action which involves a violation of local regulations or procedures, the PIC shall—

(1) Notify the appropriate local Authority without delay ;

(2) Submit a report of the circumstances, if required by the State in which the incident occurs ; and

(3) Submit a copy of this report to the State of Operator if an AOC or State of Register if in general aviation.

(*c*) Each PIC shall submit reports specified in paragraph (*b*) to the Authority within 10 days in the form prescribed.

8.5.1.3. Negligent or Reckless Operations of the Aircraft.

(*d*) No person may operate an aircraft in a negligent or reckless manner so as to endanger life or property of others.

8.5.1.4. Fitness of Flight Crewmembers.

(*a*) No person may act as PIC or in any other capacity as a required flight crew member when he or she is aware of any decrease in his or her medical fitness which might render the crewmember unable to safely exercise the privileges of his or her licence.

(*b*) The PIC shall be responsible for ensuring that a flight is not—

(1) Commenced if any flight crewmember is incapacitated from performing duties by any cause such as injury, sickness, fatigue, the effects of alcohol or drugs ; or

(2) Continued beyond the nearest suitable aerodrome if a flight crewmember's capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness or lack of oxygen.

8.5.1.5. Prohibition on use of Psychoactive Substances, Including Narcotics, Drugs or Alcohol.

(*a*) No person may act or attempt to act as a crewmember of a civil aircraft-

(1) Within 8 hours after the consumption of any alcoholic beverage ;

(2) While under the influence of alcohol ; or

(3) While using any psychoactive substance that affects the person's faculties in any way contrary to safety.

(*b*) A crewmember shall, up to 8 hours before or immediately after acting or attempting to act as a crewmember, on the request of a law enforcement officer or the Authority, submit to a test to indicate the presence of alcohol or other psychoactive substances in the blood.

(*c*) Whenever there is a reasonable basis to believe that a person may not be in compliance with this paragraph and upon the request of the Authority, that person shall furnish the Authority or authorise any clinic, doctor, or other person to release to the Authority, the results of each blood test taken for presence of alcohol or narcotic substances up to 8 hours before or immediately after acting or attempting to act as a crewmembers.

(*d*) Any test information provided to the Authority under the provisions of this section may be used as evidence in any legal proceeding.

8.5.1.6. Flight Crewmember use of Seat Belts and Shoulder Harnesses.

(*a*) Each flight crewmember shall have his or her seat belts fastened during takeoff and landing and all other times when seated at his or her station.

(*b*) Each flight crewmember occupying a station equipped with a shoulder harness shall fasten that harness during takeoff and landing, except that the shoulder harness may be unfastened if the crewmember cannot perform the required duties with the shoulder harness fastened.

(*c*) Each occupant of a seat equipped with a combined safety belt and shoulder harness shall have the combined safety belt and shoulder harness properly secured about that occupant during takeoff and landing and be able to properly perform assigned duties.

(*d*) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crewmembers in the performance of their duties or with the rapid egress of occupants in an emergency.

8.5.1.7. Flight Crewmembers At Duty Stations.

(*a*) Each required flight crewmember shall remain at the assigned duty station during take-off and landing and critical phases of flight.

(*b*) Each flight crewmember shall remain at his or her station during all phases of flight unless—

(1) Absence is necessary for the performance of his or her duties in connection with the operation ;

(2) Absence is necessary for physiological needs, provided one qualified pilot remains at the controls at all times ; or

(3) The crewmember is taking a rest period and a qualified relief crewmember replaces him or her at the duty station.

(*i*) For the assigned PIC during the en route cruise portion of the flight by a pilot who holds an airline transport pilot licence and an appropriate type rating, and who is currently qualified as PIC or CP, and is qualified as PIC of that aircraft during the *en route* cruise portion of the flight ; and

(*ii*) In the case of the assigned CP, by a pilot qualified to act as PIC or Co-Pilot of that aircraft during en route operations

8.5.1.8. Required Crewmember Equipment.

(*a*) Each crew member involved in night operations shall have a flashlight at his or her station.

(*b*) Each pilot crewmember shall have at his or her station an aircraft checklist containing the normal, abnormal and emergency procedures relating to the operation of the aircraft for that type aircraft.

(*c*) Each pilot crew member shall have at his or her station current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted.

(*d*) Each flight crewmember assessed as fit to exercise the privileges of a licence subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when performing as a required crewmember in commercial air transport.

8.5.1.9. Compliance with Checklists.

(*a*) The PIC shall ensure that the flightcrew follows the approved checklist procedures when operating the aircraft.

8.5.1.10. Search and Rescue Information.

(*a*) For all international flights, the PIC shall have on board the aircraft essential information concerning the search and rescue services in the areas over which he or she intends to operate the aircraft.

(*b*) The owner of the aeroplane, or in the case where it is leased, the lessee, shall at all times have available for immediate communication to rescue coordination centres, lists containing information on the emergency and survival equipment carried on board the aeroplane engaged in international air navigation. The information shall include, as applicable, the number, colour and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

8.5.1.11. Production of Aircraft and Flight Documentation.

(*a*) The PIC shall, within a reasonable time of being requested to do so by a person authorised by the Authority, produce to that person the documentation required to be carried on the aircraft.

8.5.1.12. Locking of Flight Deck Compartment Door : Commercial Air Transport.

(*a*) The PIC shall ensure that the flight deck compartment door (if installed) is locked at all times during passenger-carrying commercial air transport operations, except as necessary to accomplish approved operations or to provide for emergency evacuation.

(*b*) No person may operate a passenger carrying aeroplane having a maximum certificated takeoff mass in excess of 45,000 kg or with a passenger capacity greater than 60 unless the flightcrew compartment door is closed and locked.

(*c*) From the time all external doors are closed following embarkation; until.

(*d*) Any such door is opened for disembarkation ; except.

(*e*) When necessary to permit access and egress by authorised persons.

8.5.1.13. Admission to the Flight Deck-Commercial Air Transport.

(*a*) No person may admit any person to the flight deck of an aircraft engaged in commercial air transport operations unless the person being admitted is—

(1) An operating crewmember ;

(2) A representative of the Authority responsible for certification, licensing or inspection, if this is required for the performance of his or her official duties ; or

(3) Permitted by and carried out in accordance with instructions contained in the Operations Manual.

(*b*) The PIC shall ensure that—

(1) In the interest of safety, admission on the flight deck does not cause distraction and/or interference with the flight's operations ; and

(2) All persons carried on the flight deck are made familiar with the relevant safety procedures.

8.5.1.14. Admission of Inspector to the Flight Deck.

(*a*) Whenever, in performing the duties of conducting an inspection, an inspector from the Authority presents [Inspector's Credential Form] to the PIC, the PIC shall give the inspector free and uninterrupted access to the flight deck of the aircraft.

8.5.1.15. Duties During Critical Phases of Flight : Commercial Air Transport

(*a*) No flight crewmember may perform any duties during a critical phase of flight except those required for the safe operation of the aircraft.

(*b*) No PIC may permit a flight crewmember to engage in any activity during a critical phase of flight which could distract or interfere with the performance of his or her assigned duties.

8.5.1.16. Manipulation of the Controls-Commercial Air Transport.

(*a*) No PIC may allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.

(*b*) No person may manipulate the controls of an aircraft during commercial air transport operations unless he or she is qualified to perform the applicable crewmember functions and is authorised by the AOC holder.

8.5.1.17. Simulated Abnormal Situations In Flight: Commercial Air Transport.

(*a*) No person may cause or engage in simulated abnormal or emergency situations or the simulation of IMC by artificial means during commercial air transport operations.

8.5.1.18. Completion of the Technical Log-Commercial Air Transport and Aerial Work.

(*a*) The PIC shall ensure that all portions of the technical log are completed at the appropriate points before, during and after flight operations, including :

(1) The journey logbook and

(2) The aircraft maintenance records section.

Note : *See* Part 9 : 9.3.1.5 and 9.4.1.8 for details of the journey logbook and the aircraft maintenance records section of the technical log.

8.5.1.19. Reporting Mechanical Irregularities.

(*a*) The PIC shall ensure that all mechanical irregularities occurring during flight time are—

(*b*) For general aviation operations, entered in the aircraft logbook and disposed of in accordance with the MEL or other approved or prescribed procedure.

(*c*) For commercial air transport operations and aerial work operations, entered in the aircraft maintenance records section of the technical log for the aircraft at the appropriate points before, during and at the end of that flight time.

8.5.1.20. Reporting of Facility And Navigation Aid Inadequacies.

(*a*) Each crewmember shall report, without delay, any inadequacy or irregularity of a facility or navigational aid observed in the course of operations to the person responsible for that facility or navigational aid.

8.5.1.21. Reporting of Hazardous Conditions.

(*a*) The PIC shall report to the appropriate ATC facility, without delay and with enough detail to be pertinent to the safety of other aircraft, any hazardous flight conditions encountered en route, including those associated with meteorological conditions.

8.5.1.22. Reporting of Incidents.

(*a*) Air traffic incident report. The PIC shall submit, without delay, an air traffic incident report whenever an aircraft in flight has been endangered by-

(1) A near collision with another aircraft or object ;

(2) Faulty air traffic procedures or lack of compliance with applicable procedures by ATC or by the flightcrew ; or

(3) A failure of ATC facilities.

(*b*) Birds. In the event a bird constitutes an in-flight hazard or an actual bird strike occurs, the PIC shall, without delay—

(1) Inform the appropriate ground station whenever a potential bird hazard is observed ; and

(2) Submit a written bird strike report after landing.

(*c*) Dangerous Goods. The PIC shall inform the appropriate ATC facility, if the situation permits, when an in-flight emergency occurs involving dangerous goods on board.

(*d*) Unlawful Interference. The PIC shall submit a report to the local authorities and to the Authority, without delay, following an act of unlawful interference with the crewmembers on board an aircraft.

8.5.1.23. Accident Notification.

(*a*) The PIC shall notify the nearest appropriate Authority, by the quickest available means, of any accident involving his or her aircraft that results in serious injury or death of any person, or substantial damage to the aircraft or property.

(*b*) The PIC shall submit a report to the Authority of any accident which occurred while he or she was responsible for the flight.

8.5.1.24. Operation of Cockpit Voice and Flight Data Recorders.

(*a*) The PIC shall ensure that whenever an aircraft has flight recorders installed, those recorders are operationally checked and operated continuously from the instant—

(1) For a flight data recorder, the aircraft begins its takeoff roll until it has completed the landing roll, and

(2) For a cockpit voice recorder, the initiation of the pre-start checklist until the end of the securing aircraft checklist.

(*b*) The PIC may not permit a flight data recorder or cockpit voice recorder to be disabled, switched off or erased during flight, unless necessary to preserve the data for an accident or incident investigation.

(*c*) In event of an accident or incident, the PIC shall act to preserve the recorded data for subsequent investigation upon completion of flight.

8.5.1.25. Crewmember Oxygen-Minimum Supply and use.

(*a*) The PIC shall ensure that breathing oxygen and masks are available to crew members in sufficient quantities for all flights at such altitudes where a lack of oxygen might result in impairment of the faculties of crew members.

(*b*) In no case shall the minimum supply of oxygen on board the aircraft be less than that prescribed by the Authority.

Note : The requirements for oxygen supply and use are prescribed in Part 7.1.8.12, Required Instruments and Equipment.

(*c*) The PIC shall ensure that all flight crewmembers, when engaged in performing duties essential to the safe operation of an aircraft in flight, use breathing oxygen continuously at cabin altitudes exceeding 3,000 m (10000 ft) for a period in excess of 30 minutes and whenever the cabin altitude exceeds 4,000 m (13000 ft).

(*d*) One pilot at the controls of a pressurised aircraft in flight shall wear and use an oxygen mask—

(1) For general aviation operations, at flight levels above 350, if there is no other pilot at a pilot duty station ; and

(2) For commercial air transport operations, at flight levels above 250, if there is no other pilot at a pilot duty station.

8.5.1.26. Portable Electronic Devices

(*a*) No PIC or SCCM may permit any person to use, nor may any person use a portable electronic device on board an aircraft that may adversely affect the performance of aircraft systems and equipment unless—

(1) For IFR operations other than commercial air transport, the PIC allows such a device before its use ; or

(2) For commercial air transport operations, the AOC holder makes a determination of acceptable devices and publishes that information in the Operations Manual for the crew members use ; and

(3) The PIC informs passengers of the permitted use.

8.5.1.27. Carriage of Dangerous Goods.

(*a*) No person shall carry dangerous goods in an aircraft registered in Nigeria or operated in Nigeria except :

(4) With the written permission of the Authority and subject to any condition the Authority may impose in granting such permission ; and

(5) In accordance with the Technical Instructions for the Safe Transport of Dangerous Goods by Air issued by the Council of International Civil Aviation Organisation and with any variations to those instructions that the Authority may from time to time mandate and provide notification of to ICAO.

8.5.1.28. Microphones.

(*a*) For AOC holders operating aircraft, a required flight crew member shall use a boom or throat microphone to communicate with another flight crew member and air traffic service below the transition level or altitude.

(*b*) For general aviation operations in an aeroplane, helicopter or powered lift aircraft, a required flight crew member should use a boom or throat microphone to communicate with another flight crew member and air traffic service below the transition level or altitude.

(*c*) For aerial work operations, a required flight crew member should use a boom or throat microphone to communicate with another flight crew member and air traffic service below the transition level or altitude, as applicable to the mission.

8.5.1.29. Passenger Health and Safety.

(*a*) Whenever there is a reasonable basis to believe that a person may be suffering from a sickness other than air sickness, or the person displays the symptoms of a communicable disease, (*See* IS: 8.5.1.29 (1)), the pilot in command shall notify air traffic control or the Port Health Authority as applicable.

(*b*)(*i*) Immediately upon landing, a report shall be made to the applicable Port Health Authority containing the information contained in the general declaration.

(*ii*) The report to the Port Health Authority shall contain, in addition to the person suspected of being inflicted, the names and contact details of the passengers seated in the same row and the two rows in front and behind, in addition to any other person known to have been in close contact with the primary person concerned.

(*iii*) Copies of any such report shall be submitted to the Authority.

8.6. FLIGHT PLANNING AND SUPERVISION

8.6.1.1. Submission of a Flight Plan .

(*a*) Before operating one of the following, a pilot shall file a VFR or IFR flight plan, as applicable, for—

(1) Any flight (or portion thereof) to be provided with ATC service ;

(2) Any IFR flight within advisory airspace ;

(3) Any flight within or into designated areas, or along designated routes, when so required by the Authority to facilitate the provision of flight information, alerting and search and rescue services ;

(4) Any flight within or into designated areas, or along designated routes, when so required by the Authority to facilitate co-ordination with appropriate military units or with ATC facilities in adjacent states in order to avoid the possible need for interception for the purpose of identification ; and

(*b*) Any flight across international borders.

(*c*) The PIC shall submit a flight plan before departure or during flight, to the appropriate ATC facility, unless arrangements have been made for submission of repetitive flight plans.

(1) Unless otherwise prescribed by the Authority a pilot should submit a flight plan to the appropriate ATC facility—

(2) At least sixty minutes before departure ; or

(3) If submitted during flight, at a time which will ensure its receipt by the appropriate ATC facility at least ten minutes before the aircraft is estimated to reach—

(*i*) The intended point of entry into a control area or advisory area ; or

(*ii*) The point of crossing an airway or advisory route.

8.6.1.2. Air Traffic Control Flight Plan-commercial Air Transport.

(*a*) No person may takeoff an aircraft in commercial air transport if an ATC flight plan has not been filed, except as authorised by the Authority.

8.6.1.3. Contents of a Flight Plan.

(*a*) Each person filing an IFR or VFR flight plan shall include in it the following information—

(1) Aircraft identification ;

(2) Flight rules and type of flight ;

(3) Number and type(s) of aircraft and wake turbulence category ;

(4) Equipment ;

(5) Departure aerodrome and alternate (if required) ;

(6) Estimated off-block time ;

(7) Cruising speed(s) ;

(8) Cruising level(s) ;

(9) Route to be followed ;

(10) Enroute alternate aerodrome (if required) ;

(11) Destination aerodrome and alternate(s) (if required) ;

(12) Fuel endurance ;

(13) Total number of persons on board ;

(14) Emergency and survival equipment ; and

(15) Other information.

8.6.1.4. Planned Reclearance.

(*a*) If during flight planning a person determines that there is a possibility depending on fuel endurance, that a flight may be able to change destinations and still comply with minimum fuel supply planning requirements, that person shall notify the appropriate ATC facility of this possibility when the flight plan is submitted.

Note : The intent of this provision is to facilitate a new clearance to a revised destination, normally beyond the filed destination aerodrome.

8.6.1.5. Changes to a Flight Plan.

(*a*) When a change occurs to a flight plan submitted for an IFR flight or a VFR flight operated as a controlled flight, the pilot shall report that change as soon as practicable to the appropriate ATC facility.

(*b*) For VFR flights other than those operated as controlled flight, the PIC shall report significant changes to a flight plan as soon as practicable to the appropriate ATC facility.

Note : *Information submitted before departure regarding fuel endurance or total number of persons carried on board, if incorrect at time of departure, constitutes a significant change and shall be reported.*

8.6.1.6. Closing a Flight Plan.

(*a*) The PIC shall make a report of arrival either in person or by radio to the appropriate ATC facility at the earliest possible moment after landing at the destination aerodrome, unless ATC automatically closes a flight plan.

(*b*) When a flight plan has been submitted for a portion of a flight, but not the arrival at destination, the pilot shall close that flight plan *en route* with the appropriate ATC facility.

(*c*) When no ATC facility exists at the arrival aerodrome, the pilot shall contact the nearest ATC facility to close the flight plan as soon as practicable after landing and by the quickest means available.

(*d*) Pilots shall include the following elements of information in their arrival reports—

(1) Aircraft identification ;

(2) Departure aerodrome ;

(3) Destination aerodrome (only in the case of a diversionary landing) ;

(4) Arrival aerodrome ; and

(5) Time of arrival.

8.6.2. FLIGHT PLANNING AND PREPARATION.

8.6.2.1. Aircraft Airworthiness and Safety Precautions.

(*a*) The PIC may not operate a civil aircraft in flight until satisfied that—

(1) The aircraft is airworthy, duly registered and that appropriate certificates are aboard the aircraft ;

(2) The instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions ; and

(3) Any necessary maintenance has been performed and a maintenance release, if applicable, has been issued in respect to the aircraft.

(*b*) For commercial air transport operations, the PIC shall certify by signing the aircraft technical log that he or she is satisfied that the requirements of paragraph (*a*) have been met for a particular flight.

(*c*) If, after passing the outer marker fix in case of precision approach, or after descending below 300 m (1 000 ft) above the heliport in case of non-precision approach, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H. In any case, a helicopter shall not continue its approach-to-land beyond a point at which the limits of the heliport operating minima would be infringed.

8.6.2.2. Adequacy of Operating Facilities.

(*a*) No person may commence a flight unless it has been determined by every reasonable means available that the ground and/or water areas and facilities available and directly required for such flight and for the safe operation of the aircraft, are adequate, including communication facilities and navigation aids.

(*b*) An operator shall ensure that any inadequacy of facilities observed in the course of operations is reported to the Authority responsible for them, without undue delay.

(*c*) Subject to their published conditions of use, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of meteorological conditions.

(*d*) An operator shall, as part of its safety management system, assess the level of rescue and fire fighting service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

(*e*) Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the operations manual.

Note 1 : "*Reasonable means*" denotes use, at the point of departure, of information available to the PIC either through official information published by the aeronautical information services or readily obtainable in other sources.

Note 2 : ICAO *Annex* 6, Part 1, Attachment K, contains guidance on assessing an acceptable level of RFFS protection at aerodromes.

Note 3 : It is not intended that this guidance limit or regulate the operation of an aerodrome. The assessment performed by the operator does not in any way affect the RFFS requirements of ICAO *Annex* 14, Volume I, for aerodromes.

8.6.2.3. Meteorological Reports and Forecasts.

(*a*) Before commencing a flight, the PIC shall be familiar with all available meteorological information appropriate to the intended flight.

(*b*) The PIC shall include, during preparation for a flight away from the vicinity of the place of departure and for every flight under the instrument flight rules—

(1) A study of available current meteorological reports and forecasts ; and

(2) The planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of meteorological conditions.

8.6.2.4. Meteorological Limitations for VFR Flights.

(*a*) No person will commence a flight to be conducted in accordance with VFR unless available current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route, or that part of the route to be flown under VFR, will, at the appropriate time, allow VFR operations.

8.6.2.5. IFR Destination Aerodromes.

(*a*) No person may conduct an IFR flight unless—

(1) At the time of take-off, the meteorological conditions at the departure aerodrome are at or above the operator's established aerodrome operating minima for that operation ; and

(2) At the time of take-off or point of in-flight re-planning, current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions will be, at the estimated time of use, at or above the operator's established aerodrome operating minima for that operation.

Note : A partial exception is granted for commercial air transport IFR flight planning, to the effect that the meteorological conditions at the destination do not have to be at or above the approach minima to release and commence a flight, as long as the designated alternate aerodrome meets the IFR meteorological selection criteria.

8.6.2.6. IFR Destination Alternate Requirement.

(*a*) (AAC) No person may commence an IFR flight in an aeroplane without at least one destination alternate aerodrome listed in the flight plan unless—

(1) The duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the ETA at the aerodrome of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions ; or

(2) The aerodrome of intended landing is isolated and there is no suitable destination alternate aerodrome, and

(*i*) There is a standard instrument approach procedure prescribed for the aerodrome of intended landing by the jurisdictional authorities ; and

(*ii*) Available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the ETA—

(*A*) A cloud base of at least 600m (2000ft) above the airport elevation ; and

(*B*) Visibility will be at least 3 km (2 statute miles).

(*b*) (AOC) No person may commence an IFR flight in an aeroplane—

(1) without at least one destination alternate aerodrome listed in the flight plan unless—

(*i*) the duration of the flight from the departure aerodrome, or from the point of in-flight re-planning to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use there is a reasonable certainty that

(*A*) the approach and landing may be made under visual meteorological condition ; and

(*B*) separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational instrument approach procedure, or

(*ii*) the aerodrome is isolated, and

(*A*) for each flight into an isolated aerodrome a point of no return shall be determined ; and

(*B*) a flight to be conducted to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic, and other operational conditions indicate that a safe landing can be made at the estimated time of use.

(*C*) The fuel requirements of Subsection 8.6.2.15(*b*)(4)(*iv*) are met.

(2) without at least two destination alternate aerodromes listed in the operational and ATC flight plan when, for the destination aerodrome—

(*i*) meteorological condition as at the estimated time of use will be below the operator's established aerodrome operating minima for that operation ; or

(*ii*) meteorological information is not available.

Note 1 : Separate runways are two or more runways at the same aerodrome configured such that is one runway is closed, operations to the other runway(s) can be conducted.

(*c*) (AAC) No person may commence an IFR flight in a helicopter,

(1) where no alternate aerodrome is required unless,

(*i*) The operation is conducted as general aviation : and

(*ii*) Available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the ETA :

(*A*) A cloud base of at least 300m (1000ft) above the aerodrome elevation, or at least 120m (400ft) above the lowest applicable approach minimum, whichever is higher ; and

(*B*) Visibility will be at least 3 km (2 statute miles).

Note : These should be considered as minimum values where a reliable and continuous meteorological watch is maintained. When only an "*area*" type forecast is available, these values should be increased accordingly.

(2) without at least one destination alternate heliport listed in the flight plan unless the available information indicates that conditions, at the heliport of intended landing and at least one alternate heliport will, at the ETA, be at or above the heliport operating minima.

(*d*) (*AOC*) *No person may commence an IFR flight in a helicopter*—

(1) without at least one destination alternate heliport listed in the flight plan unless the available information indicates that conditions, at the heliport of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions as prescribed by Nigeria or

(2) without at least two destination alternate heliports, forecast to be at are above the helicopter operating minima, listed in the operational and ATC flight plan when, at the time of flight departure, the intended heliport destination is forecast to be below the helicopter operating minima ; or

(3) If the heliport of intended landing is isolated and no suitable alternate is available, in which casea point of no return shall be determined.

(*e*) The ceiling and visibility requirements for operations conducted in accordance with paragraphs (*a*)-(*d*) may be reduced upon approval of the Authority for—

(1) Other categories of aircraft, such as powered-lift, and airships ;

(2) Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, which contains the following :

(*i*) Capabilities of the operator ;

(*ii*) Overall capability of the aeroplane and its systems ;

(*iii*) Available aerodrome technologies, capabilities and infrastructure ;

(*iv*) Quality and reliability of meteorological information ;

(*v*) Identified hazards and safety risks associated with each alternate aerodrome variation ;

(*vi*) Specific mitigation measures.

8.6.2.7. IFR Alternate Aerodrome Selection Criteria.

(*a*) If alternate minimums are published, no PIC may designate an alternate aerodrome in an IFR flight plan unless the current available forecast indicates that the meteorological conditions at that alternate at the ETA—

(1) (AAC) will be at or above those published alternate minimums upon take-off from the departing aerodrome, or

(2) (AOC) will be at or above the operators established minima for that operation upon

(*i*) take-off from the departing aerodrome, or

(*ii*) the point of in-flight re-planning.

(*b*) If alternate minimums are not published, and if there is no prohibition against using the aerodrome as an IFR planning alternate, each PIC shall ensure that the meteorological conditions at that alternate at the ETA will be at or above—

(1) For aeroplanes :

(*i*) For a precision approach procedure, a ceiling of at least 180 m (600 ft) and visibility of not less than 3 km (2 statute miles) ; or

(*ii*) For a non-precision approach procedure, a ceiling of at least 240 m (800 ft) and visibility of not less than 5 km (3 statute miles).

(2) For helicopters :

(*i*) Ceiling 60m (200ft) above the minimum for the approach to be flown, and visibility at least 1 statute mile but never less than the minimum visibility for the approach to be flown : or

(*ii*) If no instrument approach procedure has been published and no special instrument approach procedure has been issued by the Authority to the operator, for the alternate airport, the ceiling and visibility minima are those allowing descent from the MEA, approach, and landing under basic VFR.

(*b*) The Planning Minima Table will be used in selecting IFR alternate aerodromes.

(*c*) To ensure that an adequate margin of safety is observed in determining whether or not an approach and landing can be safely carried out at each alternate aerodrome, the operator shall specify appropriate incremental values for height of cloud base and visibility, acceptable to the State of the Operator, to be added to the operator's established aerodrome operating minima.

(*d*) The State of the Operator shall approve a margin of time established by the operator for the estimated time of use of an aerodrome.

Planning Minima

(*Ceiling and RVR/visibility required, if applicable*)

Type of Approach	*Aerodome with*	
	at least 2 separate approach procedures based on 2 separate aids serving 2 separate runways (See Note 1)	at least 2 separate approach procedures based on 2 separate aids serving 1 runway or, at least 1 approach procedure based on 1 aid serving 1 runway
Precision Approach CAT II, III (ILS, LS)	Precision Approach CAT I Minima.	Non-Precision Approach Minima
Precision Approach CAT 1(ILS, MLS)	Non-Precision Approach Minima.	Circling minima or, if not available, non-precision approach minima plus 60 m (200 ft)/1,000m(3300 ft)
Non-Precision Approach	The lower of non-precision approach minima plus 60m (200 ft)/ 1,000m (3300 ft) or circling minima.	The higher of non-precision approach minima plus 60m (200 ft)/1,000m (3300 ft) or circling minima
Circling Approach	Circling Minima	Circling Minima

Note : Runways on the same aerodrome are considered to be separate runways when they are separate landing surfaces which may overlay or cross such that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway and each of the landing surfaces has a separate approach based on a separate aid.

8.6.2.8. Offshore Alternates for Helicopter Operations (AOC)

(*a*) No person may designate an offshore alternate landing site—

(1) when it is possible to carry enough fuel to have an on-shore alternate landing site, or

(2) when the environment around the offshore alternate is hostile.

Note : The selection of offshore alternates should be exceptional cases, the details of which have been approved by the Authority, and should not include payload enhancement in IMC.

(*b*) Each person selecting an off-shore alternate landing site shall consider the following :

(1) Until the point of no return, using an on-shore alternate. The offshore alternate may be used only after a point of no return.

(2) Attaining one engine inoperative performance capability before arrival at the alternate.

(3) Guaranteeing helideck availability.

(4) The meteorological information at the helideck shall be available from a source approved by the Authority.

(5) For IFR operations, an instrument approach procedure shall be prescribed and available.

(6) Attaining mechanical reliability of critical control systems and critical components when determining the suitability of the alternate.

Note : The landing technique specified in the flight manual following control system failure may preclude the selection of certain helidecks as alternate aerodromes. The mechanical reliability of critical control systems shall be taken into account when determining the suitability and necessity for an offshore alternate.

8.6.2.9. Takeoff Alternate Aerodromes-commercial Air Transport Operations

(*a*) No person may release or takeoff an aeroplane without a suitable takeoff alternate specified in the flight plan if either—

(1) it would not be possible to return to the aerodrome of departure, or

(2) meteorological conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation.

(*b*) Each operator shall ensure that each takeoff alternate specified shall be located within the following flight time from the aerodrome of departure—

(1) For two-engine aeroplane, one hour flight time at a one-engine-inoperative cruising speed, determined form the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass ; or

(2) For three or more - engine aeroplane, two hours flight time at an all engine operating cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass ; or

(3) For aeroplanes engaged in extended diversion time operations where an alternate aerodrome meeting the distance criteria of (*b*)(1) or (2) above is not available, the first available alternate aerodrome located within the distance of the operator's approved cat considering the actual take-off mass.

(4) A take-off alternate heliport shall be selected and specified in the operational flight plan if the weather conditions at the heliport of departure are at or below the applicable heliport operating minima.

(*c*) The ceiling and visibility requirements for operations conducted in accordance with paragraphs (*a*) and (*b*) may be reduced upon approval of the Authority for—

(1) Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, which contains the following :

(*i*) Capabilities of the operator ;

(*ii*) Overall capability of the aeroplane and its systems ;

(*iii*) Available aerodrome technologies, capabilities and infrastructure ;

(*iv*) Quality and reliability of meteorological information ;

(*v*) Identified hazards and safety risks associated with each alternate aerodrome variation ;

(*vi*) Specific mitigation measures.

Note : ICAO Doc 9859, Safety Management Manual, and ICAO Doc 9976, Flight Planning and Fuel Management Manual, contain guidance on performing a safety risk assessment and on determining variations, including examples of variations.

8.6.2.10. Maximum Distance from an Adequate Aerodrome for Aeroplanes Without an EDTO approval-(AOC).

(*a*) Unless specifically approved by the Authority (EDTO Approval), an AOC holder shall not operate a an aeroplane with two engines or more over a route which contains a point further from an adequate aerodrome than, in the case of—

(1) Turbine-powered aeroplanes the distance flown in 60 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (*b*).

(2) Piston-engined aeroplanes :

(*i*) The distance flown in 120 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b) ; or

(*ii*) 555 km (300 nautical miles), whichever is less.

(*b*) An AOC holder shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each aeroplane with two or more engines operated, not exceeding Vmo based upon the true airspeed that the aeroplane can maintain with one engine inoperative under the following conditions :

(1) International Standard Atmosphere ;

(2) Level flight :

(*i*) For turbine-powered aeroplanes at :

(*A*) FL 170 ; or

(*B*) At the maximum flight level to which the aeroplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the AFM, whichever is less.

(*ii*) For piston-powered aeroplanes

(*A*) FL 80 ; or

(*B*) At the maximum flight level to which the aeroplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the AFM, whichever is less.

(3) Maximum continuous thrust or power on the remaining operating engine ;

(4) An aeroplane mass not less than that resulting from :

(*i*) Take off at sea level at maximum take off mass until the time elapsed since take-off is equal to the applicable threshold prescribed in paragraph (*a*) ;

(*ii*) All engines climb to the optimum long range cruise altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in subparagraph (*a*) ; and

(*iii*) All engines cruise at the long range cruise speed at this altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in paragraph (*a*).

(*c*) An AOC holder shall ensure that the following data, specific to each type or variant, is included in the Operations Manual :

(1) The one-engine-inoperative cruise speed determined in accordance with paragraph (*b*) ; and

(2) The maximum distance from an adequate aerodrome determined in accordance with paragraphs (*a*) and (*b*).

Note : The speeds and altitudes (flight levels) specified above are only intended to be used for establishing the maximum distance from an adequate aerodrome.

8.6.2.11. Requirements for Extended Diversion Time Operations-Aeroplanes (AOC).

(*a*) An AOC holder shall not conduct operations beyond the threshold distance determined in accordance with Subsection 8.6.2.10 unless approved to do so by the Authority.

(*b*) In requesting EDTO approval, each AOC holder shall show to the satisfaction of the Authority that :

(1) For aeroplanes :

(*i*) For all aeroplanes,

(*A*) the most limiting EDTO significant system time limitation, if any indicated in the Aeroplane Flight Manual (directly or by reference) and relevant to that particular operation is not exceeded ; and

(*B*) the additional fuel required by Subsection 8.6.2.15 shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by the Authority.

(*ii*) For aeroplanes with two turbine engines, the aeroplane is EDTO certifiedand has verified the—

(*A*) Reliability of the propulsion system ;

(*B*) Airworthiness certification for EDTO of the aeroplane type ; and

(*C*) EDTO maintenance programme.

(2) It has conducted a safety risk assessment which demonstrates how an equivalent level of safety will be maintained, taking into account the following :

(*i*) Capabilities of the operator ;

(*ii*) Overall reliability of the aeroplane ;

(*iii*) Reliability of each time limited system ;

(*iv*) Relevant information from the aeroplane manufacturer ; and

(*v*) Specific mitigation measures.

(*c*) Before conducting an EDTO flight, an AOC holder shall ensure that a suitable EDTO en-route alternate is available, within either the approved diversion time or a diversion time based on MEL generated serviceability status of the aeroplane whichever is shorter.

(*d*) No AOC holder shall commence a flight unless, during the possible period of arrival, the required en-route alternate aerodrome will be available and the available information indicates that conditions at the aerodrome will be at or above the aerodrome operating minima approved for the operation.

(*e*) No AOC holder shall conduct operations beyond 60 minutes, from a point on a route to an en-route alternate aerodrome unless it ensures that :

(1) For all aeroplanes ;

(*i*) En-route alternate aerodromes are identified ; and

(*ii*) The most up-to-date information is provided to the flight crew on identified en-route alternate aerodromes, including operational status and meteorological conditions ;

(2) For aeroplanes with two turbine engines, the most up-to-date information provided to the flight crew indicates that conditions at identified en-route alternate aerodromes will be at or above the operator's established aerodrome operating minima for the operation at the estimated time of use.

(3) these requirements are incorporated into the operators :

(*i*) operational control and flight dispatch procedures ;

(*ii*) operating procedures ; and

(*iii*) training programmes.

(*f*) No AOC Holder shall proceed beyond the threshold time approved by the Authority unless :

(1) the identified en-route alternate aerodromes have been re-evaluated for availability ; and

(2) the most up to date information indicates that, during the estimated time of use, conditions at those aerodromes will be at or above the operator's established aerodrome operating minima for that operation ; or.

(3) conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use and an alternative course of action has been determined.

Note 1 : ICAO Annex 6, Part I, Attachment D contains guidance on the requirements of this provision.

Note 2 : FAA AC 120-42B (as amended), Extended Operations (ETOPS and Polar Operations), provides additional guidance.

8.6.2.12. En Route Alternate Aerodromes-EDTO Operations (AOC)

(*a*) The PIC shall ensure that the required en route alternates for EDTO are selected and specified in ATC flight plans in accordance with the EDTO diversion time approved by the Authority.

(*b*) No person shall select an aerodrome as an EDTO en-route alternate aerodrome unless the appropriate weather reports or forecasts, or any combination thereof, indicate that during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above the planning minima prescribed in the table below, and in accordance with the operator's EDTO approval.

(*c*) The ceiling and visibility requirements for operations conducted in accordance with paragraphs (*a*) and (*b*) may be reduced upon approval of the Authority for—

(*d*) Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, which contains the following :

(*i*) Capabilities of the operator ;

(*ii*) Overall capability of the aeroplane and its systems ;

(*iii*) Available aerodrome technologies, capabilities and infrastructure ;

(*iv*) Quality and reliability of meteorological information ;

(*v*) Identified hazards and safety risks associated with each alternate aerodrome variation ;

(*vi*) Specific mitigation measures.

8.6.2.13. Fuel, Oil, and Oxygen Planning and Contingency Factors.

(*a*) No person may commence a flight unless he or she takes into account the fuel, oil, and oxygen needed to ensure the safe completion of the flight, including any reserves to be carried for contingencies.

(*b*) For aeroplanes in AOC operations, the amount of usable fuel to be carried shall, as a minimum, be based on :

(1) The following data—

(*i*) Current aeroplane-specific data derived from a fuel consumption monitoring system, if available ; or

(*ii*) If current aeroplane-specific data are not available, data provided by the aeroplane manufacturer, and

(2) The operating conditions for the planned flight including :

(*i*) Anticipated aeroplane mass ;

(*ii*) Notices to Airmen ;

(*iii*) Current meteorological reports or a combination of current reports and forecasts ;

(*iv*) ATC procedures, restrictions and anticipated delays ; and

(*v*) The effects of deferred maintenance items and/or configuration deviations.

(*vi*) Any other conditions that may delay the landing of the aeroplane or increase fuel, oil and/or oxygen consumption.

(*c*) For helicopters, each person computing the required minimum fuel and oil supply shall ensure that additional fuel and oil are carried to provide for the increased consumption that would result from any additional operating conditions in (*b*)(2) as applied to helicopters, andany of the following contingencies :

(1) Expected winds or other meteorological conditions ;

(2) Possible variations in ATC routings

(3) Anticipated traffic delays ;

(4) A complete instrument approach procedure and possible missed ap proach at destination ;

(5) Loss of pressurization en route, if applicable ;

(6) Loss of one power-unit en route ; and

(7) Any other conditions that may delay the landing of the helicopter or increase fuel, oil and/or oxygen (if applicable) consumption.

(*d*) (AAC) In-flight fuel management. The PIC shall—

(1) Continually ensure that the amount of usable fuel remaining on board is not less than the fuel required to proceed to an aerodrome/ heliport where a safe landing can be made with the planned final reserve fuel remaining upon landing.

(2) Request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome/heliport with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or the fuel required to operate to an isolated aerodrome/heliport.

(3) Advise ATC of a minimum fuel state by declaring **Minimum Fuel** when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome/ heliport may result in landing with less than planned final reserve fuel.

(4) Declare a situation of fuel emergency by broadcasting **Mayday Mayday Mayday Fuel,** when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome/heliport where a safe landing can be made is less than the planned final reserve fuel.

8.6.2.14. Minimum Fuel Supply for VFR Flights

(*a*) (AAC) Aeroplane. No person may commence a flight in an aeroplane under VFR unless, considering the wind and forecast weather conditions, there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

(1) For flights during the day, for at least 30 minutes thereafter ;

(2) For flights during the night, for at least 45 minutes thereafter, and

(*b*) (AAC) Helicopter. No person may commence a flight in a helicopter under VFR unless, considering the wind and forecast weather conditions, there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

(1) For 20 minutes thereafter ; and

(2) To have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of any of the potential contingencies specified by the operator to the satisfaction of the Authority.

8.6.2.15. Minimum Fuel Supply for IFR Flights

(*a*) (AAC) Aeroplanes. No person may commence a flight under IFR unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in flight, to—

(1) When a destination alternate aerodrome is required, fly from the aerodrome of intended landing to an alternate aerodrome, and after that, for at least 45 minutes at normal cruising altitude ;

(2) When a destination alternate aerodrome is not required, fly to the aerodrome of intended landing and after that for at least 45 minutes at normal cruising altitude.

(*b*) (AOC) Aeroplanes. No person may commence a flight under IFR, or continue past the point of in-flight re-planning, unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in flight, to include the following :

(1) Taxi fuel-which shall be the amount of fuel expected to be consumed before take-off ;

(2) Trip fuel-which shall be the amount of fuel required to enable the aeroplane to fly from take-off, or the point of in-flight re-planning, until landing at the destination aerodrome taking into account the operating conditions in the data provided by the manufacturer ;

(3) Contingency fuel - which shall be the amount of fuel required to compensate for unforeseen factors. It shall be five percent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel, but in any case, shall not be lower than the amount required to fly for five minutes at holding speed at 450 m (1500 ft) above the destination aerodrome in standard conditions ;

(4) Destination alternate fuel-which shall be :

(*i*) Where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to :

(*A*) Perform a missed approach at the destination aerodrome ;

(*B*) Climb to the expected cruising altitude ;

(*C*) Fly the expecting routing ;

(*D*) Descend to the point where the expected approach is initiated ; and

(*E*) Conduct the approach and landing at the destination alternate aerodrome ; or

(*ii*) Where two destination alternate aerodromes are required, the amount of fuel, as calculated in (4)(*i*) above, required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel ; or (*iii*) Where a flight is operated without a destination alternate aerodrome, the amount of fuel required to enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1500 ft) above destination aerodrome elevation in standard conditions; or

(*iv*) Where the aerodrome of intended landing is an isolated aerodrome :

(*A*) For a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 percent of the flight time planned to be spend at cruising level, including final reserve fuel, or two hours, whichever is less ; or

(*B*) For a turbine-engined aeroplane, the amount of fuel required to fly for two hours at normal cruise consumption above the destination aerodrome, including final reserve fuel ;

(5) Final reserve fuel - which shall be the amount of fuel calculated using the estimated mass on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required, or a pre-calculated value for each aeroplane type and variant in the fleet rounded up to an easily recalled figure :

(*i*) For a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes, under speed and altitude conditions specified by the Authority ; or

(*ii*) For a turbine-engined aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450 m (1500 ft) above aerodrome elevation in standard conditions ;

(6) Additional fuel-which shall be the supplementary amount of fuel required if the minimum fuel calculated in accordance with trip fuel, contingency fuel, destination alternate fuel and final reserve fuel above is not sufficient to :

(*i*) Allow the aeroplane to descend as necessary and proceed to an alternate aerodrome in the event of engine failure or loss or pressurization, whichever requires the greater amount of fuel based on the assumption that such a failure occurs at the most critical point along the route ;

(*A*) To fly for 15 minutes at holding speed at 450 m (1500 ft) above the aerodrome elevation in standard conditions ; and

(*B*) Make an approach and landing ;

(*C*) Allow an aeroplane engaged in EDTO to comply with the EDTO critical fuel scenario as established by the Authority ;

(*D*) Meet additional requirements not covered above.

Note : Fuel planning for a failure that occurs at the most critical point along a route may place the aeroplane in a fuel emergency situation.

(7) Discretionary fuel-shall be the extra amount of fuel to be carried at the discretion of the PIC, or

(8) Notwithstanding the provisions in (1)-(7) above, the Authority may approve a variation to these requirements provided the operator can demonstrate an equivalent level of safety will be maintained through a safety risk assessment that includes at least the following :

(*i*) Flight fuel calculations ;

(*ii*) Capabilities of the operator to include :

(*A*) A data-driven method that includes a fuel consumption monitoring programme ; and/or

(*B*) The advanced use of alternate aerodromes ; and

(*iii*) Specific mitigation measures.

(*c*) (AAC) and (AOC) Helicopters. No person may commence a flight under IFR unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in flight, to—

(1) When a destination alternate is required,

(*i*) Fly to and execute an approach, and a missed approach, at the heliport to which the flight is planned, and thereafter

(*ii*) fly for 30 minutes at a holding speed at 450 m (1500 ft) above the alternate under standard temperature conditions, and approach and land ; and

(*iii*) have a reserve for contingencies specified by the operator and approved by the Authority.

(2) When a destination alternate is not required, to fly to the heliport to which the flight is planned and thereafter :

(3) fly for 30 minutes at a holding speed at 450 m (1500 ft) above the alternate under standard temperature conditions, and approach and land ; and

(4) have a reserve for contingencies specified by the operator and approved by the Authority.

8.6.2.16. Flight Planning Document Distribution and Retention-Commercial Air Transport

(*a*) For commercial air transport operations, the PIC shall complete and sign the following flight preparation documents before departure :

(1) An operational flight plan, including NOTAMs and weather pertinent to the flight planning decisions regarding minimum fuel supply, en route performance, and destination and alternate aerodromes

(2) A load manifest, showing the distribution of the load, centre of gravity, takeoff and landing mass and compliance with maximum operating mass limitations, and performance analysis.

(3) An applicable technical log page, if mechanical irregularities were entered after a previous flight, maintenance or inspection functions were performed or a maintenance release was issued at the departure aerodrome.

(*b*) No person may takeoff an aircraft in commercial air transport unless all flight release documents, signed by the PIC, are retained and available at the point of departure.

(*c*) The PIC shall carry a copy of the documents specified in paragraph (*a*) on the aircraft to the destination aerodrome.

(*d*) Completed flight preparation documents shall be kept by the AOC holder for a period of three months.

Note : The Authority may approve a different retention location where all documents can be available for subsequent review.

8.6.2.17. Aircraft Loading, Mass and Balance.

(*a*) No person may operate an aircraft unless all loads carried are properly distributed and safely secured.

(*b*) No person may operate an aircraft unless the calculations for the mass of the aeroplane and centre of gravity location indicate that the flight can be conducted safely, taking into account the flight conditions expected.

Note : When load masters, load planners or other qualified personnel are provided by the AOC holder in a commercial air transport operation, the PIC may delegate these responsibilities, but shall ascertain that proper loading procedures are followed.

(*c*) For commercial air transport operations, no PIC may commence a flight unless the PIC is satisfied that the loading and mass and balance calculations contained in the load manifest are accurate and comply with the aircraft limitations.

8.6.2.18. Maximum Allowable Mass to be Considered on all Load Manifests

(*a*) The PIC shall ensure that the maximum allowable mass for a flight does not exceed the maximum allowable takeoff mass—

(1) For the specific runway and conditions existing at the takeoff time ; and

(2) Considering anticipated fuel and oil consumption that allows compliance with applicable en route performance, landing mass, and landing distance limitations for destination and alternate aerodromes.

8.6.2.19. Flight Release Required-Commercial Air Transport

(*a*) No person may start a flight under a flight following system without specific authority from the person authorised by the AOC holder to exercise operational control over the flight.

(*b*) No person may commence a passenger-carrying flight in commercial air transport unless a qualified person authorised by the AOC holder to perform operational control functions has issued a flight release for that specific operation or series of operations.

8.6.2.20. Operational Flight Plan-commercial Air Transport.

(*a*) No person may commence a flight unless the operational flight plan has been signed by the PIC.

(*b*) A PIC may sign the operational flight plan only when the PIC and the person authorised by the operator to exercise operational control have determined that the flight can be safely completed.

(*c*) *Note* : The operational flight plan shall include the routing and fuel calculations, with respect to the meteorological and other factors expected, to complete the flight to the destination and all required alternates.

(*d*) The PIC signing the operational flight plan shall have access to the applicable flight planning information for fuel supply, alternate aerodromes, weather reports and forecasts and NOTAMs for the routing and aerodrome.

(*e*) No person may continue a flight from an intermediate aerodrome without a new operational flight plan if the aircraft has been on the ground more than 6 hours.

8.7. AIRCRAFT OPERATING AND PERFORMANCE LIMITATIONS

8.7.1. All Aircraft.

8.7.1.1.—(*a*) This Section prescribes the operating and performance limitations for all civil aircraft. Applicability.

8.7.1.2.—(*a*) No person may operate an aircraft that— General.

(1) Exceeds its designed performance limitations for any operation, as established by the State of Registry ;

(2) Exceeds the operating limitations contained in the aircraft flight manual, or its equivalent ;

(3) Exceeds the terms of its certificate of airworthiness ; or

(4) Exceeds the mass limitations, if applicable, imposed by the terms of its noise certification standards, as contained in the applicable part of ICAO *Annex* 16, Volume I, unless otherwise approved by the Authority.

8.7.1.3. Aircraft Performance Calculations

(*a*) Each operator shall ensure that the performance data contained in the AFM, RFM, or other authorised source is used to determine compliance with the appropriate requirements of Subpart 8.7.

(*b*) When applying performance data, each person performing calculations shall account for all factors that significantly affect the performance of the aircraft configuration, including, but not limited to: mass of the aeroplane, the operating procedures, the pressure-altitude appropriate to the elevation of the aerodrome, the ambient temperature, the wind, the runway slope, and surface conditions of the runway i.e., environmental conditions, snow, slush, water, ice, for landplanes, water surface condition for seaplanes, and the operation of any system or systems that may have an adverse effect on performance.

(*c*) The factors described in subpart (b) of the aircraft performance calculations shall be taken into account directly as operations parameters or indirectly by means of allowances or margins, which may be provided in the design performance limits or in the terms of the AOC in accordance with which the aeroplane is being operated.

8.7.1.4. General Mass and Obstruction Clearance Limitations

(*a*) No person may takeoff an aircraft without ensuring that the maximum allowable mass for a flight does not exceed the maximum allowable takeoff or landing mass, or any applicable en route performance or landing distance limitations considering the—

(1) Condition of the takeoff and landing areas to be used ;

(2) Gradient of runway to be used (landplanes only) ;

(3) Pressure altitude ;

(4) Ambient temperature ;

(5) Current and forecast winds ; and

(6) Any known conditions (e.g., atmospheric and aircraft configuration) which may adversely affect aircraft performance, or compliance with noise certification standards if required.

(*b*) No person may takeoff an aircraft at a mass that, assuming normal engine operation, cannot safely clear all obstacles during all phases of flight, including all points along the intended en route path or any planned diversions.

8.7.2. AIRCRAFT USED IN COMMERCIAL AIR TRANSPORT

8.7.2.1. Applicability.

(*a*) This Section prescribes aircraft performance and operating limitations for aircraft used in commercial air transport operations, except for those used by air transport operators holding a special authorization or waiver granted by the Authority, that exempts the aircraft from specific operating and performance limitations.

8.7.2.2. General.

(*a*) Each person operating an aircraft engaged in commercial air transport shall comply with the provisions of Section 8.7.2.

(*b*) Each person operating a rotorcraft identified as Class 1, 2, or 3 in international commercial air transport shall comply with the code of performance in IS : 8.7.2.2(*b*).

(*c*) The Authority may grant exemptions in accordance with Part 1 of these regulations, from the requirements of Section 8.7.2 if special circumstances make a literal observance of a requirement unnecessary for safety.

(*d*) Where full compliance with the requirements of Section 8.7.2 cannot be shown due to specific design characteristics (e.g., seaplanes, airships, or supersonic aircraft), the operator shall apply approved performance standards that ensure a level of safety not less restrictive than those of relevant requirements of this Section.

(*e*) No person may operate a single-engine aircraft or an aircraft type certificated for operation by a single-pilot used for revenue passenger carrying operations unless that aircraft is continually operated in daylight, VFR, excluding over the top, and over routes and diversions there that do not permit a safe forced landing to be executed in the event of an engine failure.

(1) Notwithstanding Subsection 8.7.2.2(*e*), the Authority may approve single-pilot operations in propeller driven, turbine powered aircraft under IFR, at night, or under IMC for aircraft certificated for a maximum take-off weight of 5,700 kg (12566 lb) or less and a maximum approved passenger seating configuration of 9 or less, provided it meets the equipment requirements of Part 7.

(2) Notwithstanding Subsection 8.7.2.2(*e*)(1), the Authority may approve single-pilot operations in propeller driven, turbine powered aircraft under IFR at night, or under IMC for aircraft certificated maximum take-off weight of 5,700 kg (12566 lb) or less with a passenger seating configuration of more than 9 passengers if the aircraft is type certificated for operations by a single pilot, provided it meets the equipment requirements of Part 7 and the Authority has authorised an exemption from Subsection 8.7.2.2(*e*)(1) in the operators operations specifications. If such operations are to be conducted outside Nigeria, the Nigeria shall have an arrangement with the States where operations will be conducted.

(*f*) No person may operate a multiengine aircraft used for revenue passengers carrying operations that is unable to comply with any of the performance limitations of Subsections 8.7.2.5 through 8.7.2.9 unless that aircraft is continually operated—

(1) In daylight ;

(2) In VFR, excluding over the top operations ; and

(3) At a mass that will allow it to climb, with the critical engine inoperative, at least 15 m (50ft) a minute when operating at the MEAs of the intended route or any planned diversion, or at 1500 m (5,000 ft) MSL, whichever is higher.

(*g*) Multiengine aircraft that are unable to comply with paragraph (*e*)(3) are, for the purpose of this Section, considered to be a single engine aircraft and shall comply with the requirements of paragraph (*d*).

8.7.2.3. Single and Multi-Engine Aeroplane Operations

(*a*) No person may operate a single-engine aircraft in revenue passenger carrying operations unless that aircraft is continually operated in daylight, VFR over such routes and diversions there from that permit a safe forced landing to be executed in the event of an engine failure.

(1) Notwithstanding Subsection8.7.2.3 (*a*), the Authority may approve single-engine operations in propeller driven, turbine powered aircraft under IFR, at night, or under IMC for aircraft certificated for a maximum take-off weight of 5,700 kg or less and a maximum approved passenger seating configuration of 9 or less, provided it meets the equipment requirements of Part 7.

(2) Notwithstanding Subsection 8.7.2.3 (*a*)(1), the Authority may approve single-engine operations in propeller driven, turbine powered aircraft under IFR at night, or under IMC for aircraft certificated maximum take-off weight of 5,700 kg or less with a passenger seating configuration of more than 9 passengers if the aircraft is type certificated for operations by a single pilot, provided it meets the equipment requirements of Part 7 and the Authority has authorised an exemption from Subsection 8.7.2.3 (*a*)(1),in the operators operations specifications. If such operations are to be conducted outside Nigeria, the Nigeria shall have an arrangement with the States where operations will be conducted.

(*b*) No person shall operate single-engine turbine-powered aeroplanes at night and/or in IMC unless the airworthiness certification of the aeroplane is appropriate and acceptable to the Authority and that the overall safety of the operation is consistent with commercial air transportation operations as provided by :

(1) The reliability of the turbine engine ;

(2) The operator's maintenance procedures, operating practices, flight dispatch procedures ;

(3) Crew training programmes ; and

(4) Equipment and additional requirements provided in accordance with paragraph (*d*)

(*c*) No person shall operate a single-engine turbine-powered aeroplane at night and/or in IMC unless the aeroplane has an engine trend monitoring system, and those aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 2005 shall have an automatic trend monitoring system.

(*d*) IS : 8.7.2.3 provides additional airworthiness and operational requirements applicable to the operation of single-engine turbine-powered aeroplanes at night and/or in IMC with respect to :

(1) Turbine engine reliability ;

(2) Systems and equipment ;

(3) Minimum equipment list ;

(4) Flight manual information ;

(5) Event reporting ;

(6) Operator planning ;

(7) Flight crew experience, training and checking ;

(8) Route limitations over water ;

(9) Operator certification or validation.

(*e*) No person may operate a multiengine aircraft used for revenue passengers carrying operations that is unable to comply with any of the performance limitations of Subsections 8.7.2.4 through 8.7.2.8 unless that aircraft is continually operated—

(1) In daylight ;

(2) In VFR, excluding over the top operations ; and

(3) At a mass that will allow it to climb, with the critical engine inoperative, at least 15 m (50 ft) a minute when operating at the MEAs of the intended route or any planned diversion, or at 1500 m (5000 ft) MSL, whichever is higher.

(*f*) Multiengine aircraft that are unable to comply with paragraph (*e*) (3) are, for the purpose of this Section, considered to be a single engine aircraft and shall comply with the requirements of paragraph (*a*).

8.7.2.4. Aircraft Performance Calculations

(*a*) No person may takeoff an aircraft used in commercial air transport without ensuring that the applicable operating and performance limitations required for this section can be accurately computed based on the AFM, RFM, or other data source approved by the Authority.

(*b*) Each person calculating performance and operating limitations for aircraft used in commercial air transport shall ensure that performance data used to determine compliance with this section can, during any phase of flight, accurately account for—

(1) Any reasonably expected adverse operating conditions that may affect aircraft performance ;

(2) One engine failure for aircraft having two engines, if applicable ; and

(3) Two engine failure for aircraft having three or more engines, if applicable.

(*c*) When calculating the performance and limitation requirements of Subsections 8.7.2.5 to8.7.2.9, each person performing the calculation shall, for all engines operating and for inoperative engines, accurately account for—

(1) In all phases of flight—

(*i*) The effect of fuel and oil consumption on aircraft mass ;

(*ii*) The effect of fuel consumption on fuel reserves resulting from changes in flight paths, winds, and aircraft configuration ;

(*iii*) The effect of fuel jettisoning on aircraft mass and fuel reserves, if applicable and approved ;

(*iv*) The effect of any ice protection system, if applicable and weather conditions require its use ;

(*v*) Ambient temperatures and winds along intended route and any planned diversion ;

(*vi*) Flight paths and minimum altitudes required to remain clear of obstacles.

(2) During take off and landing—

(*d*) The condition of the takeoff runway or area to be used, including any contaminates (e.g., water, slush, snow, ice) ;

(1) The gradient of runway to be used ;

(2) The runway length including clearways and stopways, if applicable ;

(3) Pressure altitudes at takeoff and landing sites ;

(4) Current ambient temperatures and winds at takeoff ;

(5) Forecast ambient temperatures and winds at each destination and planned alternate landing site;

(6) The ground handling characteristics (e.g., braking action) of the type of aircraft ; and

(7) Landing aids and terrain that may affect the takeoff path, landing path, and landing roll.

Note 1: *Where conditions are different from those on which the performance is based, compliance may be determined by interpolation or by computing the effects of changes in the specific variables, if the results of the interpolation or computations are substantially as accurate as the results of direct tests.*

Note 2: *To allow for wind effect, takeoff and landing data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component.*

8.7.2.5. Take off Limitations.

(*a*) Aeroplanes. No person may takeoff an aeroplane used in commercial air transport unless the following requirements are met when determining the maximum permitted take-off mass :

(1) The takeoff run shall not be greater than the length of the runway.

(2) For turbine- powered aeroplanes—

(*i*) The takeoff distance shall not exceed the length of the runway plus the length of any clearway, except that the length of any clearway included in the calculation shall not be greater than 1/2 the length of the runway; and (*ii*) The accelerate-stop distance shall not exceed the length of the runway, plus the length of any stop way, at any time during takeoff until reaching V1.

(3) For piston-engined aeroplanes—

(*i*) The accelerate-stop distance shall not exceed the length of the runway at any time during takeoff until reaching V1.

(4) If the critical engine fails at any time after the aeroplane reaches V1, to continue the takeoff flight path and clear all obstacles either—

(*i*) By a height of at least 9 m (35 ft) vertically for turbine-powered aeroplanes or 15 m (50 ft) for piston-engined aeroplanes ; and

(*ii*) By at least 60 m (200 ft) horizontally within the aerodrome boundaries and by at least 90 m (300 ft) horizontally after passing the boundaries, without banking more than 15 degrees at any point on the takeoff flight path.

(*b*) Helicopters. No person may takeoff a helicopter used in commercial air transport that, in the event of a critical engine failure, cannot—

(1) For Class 1 helicopters—

(*i*) At or before the takeoff decision point, discontinue the takeoff and stop within the rejected takeoff area ; or

(*ii*) After the takeoff decision point, continue the takeoff and then climb, clearing all obstacles along the flight path, until a suitable landing site is found.

(2) For Class 2 helicopters—

(*i*) Before reaching a defined point after take-off, safely execute a forced landing within the rejected takeoff area, or

(*ii*) At any point after reaching a defined point after take-off, continue the takeoff and then climb, clearing all obstacles along the flight path, until a suitable landing site is found.

(3) For Class 3 helicopters—

(*i*) Clear the obstacles along its flight path by an adequate margin ; or

(*ii*) Maintain minimum flight altitude ; or

(*iii*) At engine failure permit a safe, forced landing.

(*c*) Where helicopters are operating to or from heliports in a congested hostile environment, the competent authority of the State in which the heliport is situated shall take such precautions as are necessary to control the risk associated with an engine failure.

8.7.2.6. En Route Limitations-Aeroplane-all Engines Operating.

(*a*) No person may take off a piston-engined aeroplane used in commercial air transport at a mass that does not allow a rate of climb of at least 6.9 Vso, (that is, the number of feet per minute obtained by multiplying the aeroplane's minimum steady flight speed by 6.9) with all engines operating, at an altitude of at least 300 m (1000 ft) above all terrain and obstructions within ten miles of each side of the intended track.

8.7.2.7. En Route Limitations-one Engine Inoperative.

(*a*) *Aeroplane*. No person may take off an aeroplane used in commercial air transport having two engines unless that aeroplane can, in the event of a power failure at the most critical point en route, continue the flight to a suitable aerodrome where a landing can be made while allowing—

(1) For piston-engined aeroplanes—

(*i*) At least a rate of climb of 0.079 - (0.106/number of engines installed) Vso2 (when Vso is expressed in knots) at an altitude of 300 m (1000 ft) above all terrain and obstructions within 9.3 km (5 nautical miles), on each side of the intended track ; and

(*ii*) A positive slope at an altitude of at least 450 m (1500 ft) above the aerodrome where the aeroplane is assumed to land.

(2) For turbine-powered transport category aeroplanes—

(*i*) A positive slope at an altitude of at least 300 m (1000 ft) above all terrain and obstructions within 9.3 km (5 nautical miles), on each side of the intended track ;

(*ii*) A net flight path from cruising altitude to the intended landing aerodrome that allows at least 600 m (2000 ft) clearance above all terrain and obstructions within 9.3 km (5 nautical miles), on each side of the intended track ; and

(*iii*) A positive slope at an altitude of at least 450 m (1500 ft) above the aerodrome where the aeroplane is assumed to land ;

Note : The climb rate specified in paragraph (*a*)(1)(*i*) may be amended to 0.026 Vso2 for large transport category aircraft issued a type certificate before 1953.

Note : The 9.3 km (5 nautical miles) clearance margin stated in paragraph (*a*) shall be increased to 18.5 km (10 nautical miles) if navigational accuracy does not meet the 95% containment level.

(*b*) Helicopter. No person shall take off a helicopter used in commercial air transport having two engines unless that helicopter can, in the event of the critical engine failing at any point in the en route phase, continue the flight to the destination or alternate landing site without flying below the minimum flight altitude at any point and clearing all obstacles in the approach path by a safe margin.

8.7.2.8. En Route Limitations-two Engines Inoperative.

(*a*) Aeroplane. No person may takeoff an aeroplane used in commercial air transport having three or more engines at such a mass where there is no suitable landing aerodrome within 90 minutes at any point along the intended route (with all engines operating at cruising power), unless that aeroplane can, in the event of simultaneous power failure of two critical engines at the most critical point along that route, continue to a suitable landing aerodrome while allowing—

(1) For turbine-powered aeroplanes—

(*i*) A net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 600 m (2000 ft) all terrain and obstructions within 9.3 km (five nautical miles) on each side of the intended track ;

(*ii*) A positive slope at 450 m (1500 ft) above the aerodrome of intended landing ; and

(*iii*) Enough fuel to continue to the aerodrome of intended landing, to arrive at an altitude of at least 450 m (1500 ft) directly over the aerodrome, and thereafter to fly for 15 minutes at cruise power.

Note : The consumption of fuel and oil after the engine failure is the same as the consumption that is allowed for in the net flight path data in the AFM.

(2) For piston-engined aeroplanes—

(*i*) A rate of climb at 0.013 Vso2 feet per minute (that is, the number of feet per minute is obtained by multiplying the number of knots squared by 0.013) at an altitude of 300m (1000 ft) above the highest ground or obstruction within 18.6 km (10 nautical miles) on each side of the intended track, or at an altitude of 1500 m (5000 ft), whichever is higher ; and

(*ii*) Enough fuel to continue to the aerodrome of intended landing and to arrive at an altitude of at least 300 m (1000 ft) directly over that aerodrome.

Note 1 : When the two engines of the piston-engined aeroplane are predicted to fail at an altitude above the prescribed minimum altitude, compliance with the prescribed rate of climb need not be shown during the descent from the cruising altitude to the prescribed minimum altitude, if those requirements can be met once the prescribed minimum altitude is reached, and assuming descent to be along a net flight path and the rate of descent to be 0.013 Vso2 greater than the rate in the approved performance data.

Note 2 : If fuel jettisoning is authorised (or planned), the aeroplane's mass at the point where the two engines fail is considered to be not less than that which would include enough fuel to proceed to an aerodrome and to arrive at an altitude of at least 300 m (1000 ft) directly over that aerodrome.

(*b*) Helicopters. No person shall takeoff a Class 1 or Class 2 helicopter used in commercial air transport having three or more engines unless that helicopter can, in the event of two critical engines failing simultaneously at any point in the en route phase, continue the flight to a suitable landing site.

8.7.2.9. Landing Limitations.

(*a*) Aeroplane. No person may take off an aeroplane used in commercial operations unless its mass on arrival at either the intended destination aerodrome or any planned alternate aerodrome would allow a full stop landing from a point 15 m (50 ft) above the intersection of the obstruction clearance plane and the runway, and within—

(1) For turbine-powered aeroplanes, 60 percent of the effective length of each runway.

(2) For piston-engined aeroplanes, 70 percent of the effective length of each runway.

(*b*) For the purpose of determining the allowable landing mass at the destination aerodrome, each person determining the landing limit shall ensure that—

(1) The aeroplane is landed on the most favourable runway and in the most favourable direction, in still air ; or

(2) The aeroplane is landed on the most suitable runway considering the probable wind velocity and direction, runway conditions, the ground handling characteristics of the aeroplane, and considering other conditions such as landing aids and terrain.

Note : If the runway at the landing destination is reported or forecast to be wet or slippery, the landing distance available shall be at least 115 *percen*t of the required landing distance unless, based on a showing of actual operating landing techniques on wet or slippery runways, a shorter landing distance (but not less than that required by paragraph (*a*) has been approved for a specific type and model aeroplane and this information is included in the AFM.

(*c*) A turbine-powered transport category aeroplane that would be prohibited from taking off because it could not meet the requirements of paragraph (*a*)(1), may take off if an alternate aerodrome is specified that meets all the requirements of paragraph (*a*).

(*d*) Helicopters. No person may take off a helicopter used in commercial air transport unless, with all engines operating on arrival at the intended destination landing site or any planned alternate landing, it can clear all obstacles on the approach path and can land and stop within the landing distance available.

(*e*) Helicopters. No person may take off a helicopter used in commercial air transport unless, in the event of any engine becoming inoperative in the approach and landing phase on arrival at the intended destination landing site or any planned alternate landing, it can—

(1) For Class 1 helicopters—

(*i*) Before the landing decision point, clear all obstacles on the approach path and be able to land and stop within the landing distance available or to perform a balked landing and clear all obstacles in the flight path by an adequate margin ; or

(*ii*) After the landing decision point, land and stop within the landing distance available.

(2) For Class 2 helicopters—

(*i*) Before reaching a defined point before landing, safely execute a forced landing within the landing distance available.

(3) For Class 3 helicopters—

(*i*) Safely execute a forced landing within the landing distance available.

8.7.2.10. Additional Requirements For Class 3 Helicopters Operating In IMC

(*a*) Except for special VFR flights, no person may operate a performance Class 3 helicopter in IMC unless :

(1) The surface environment over which the operation is to be performed is acceptable to the Authority ;

(2) The helicopter is certified for flight under IFR ;

(3) The operation is approved by the Authority taking into consideration the overall level of safety provided by :

(*i*) The reliability of the engines ;

(*ii*) The operator's maintenance procedures, operating practices and crew training programmes; and equipment including the operator's vibration health monitoring practices for the tail-rotor drive system.

(*b*) Where the State of the Operator permits IMC operations in performance Class 3, such operations shall be conducted in accordance with the provisions of this sub-part.

(*c*) Except for special VFR flights, no person may operate a performance Class 3 helicopter in IMC unless the operator has an engine trend monitoring system and uses the instruments, systems and operational/maintenance procedures to monitor the engines that are recommended by the helicopter manufacture.

8.8. FLIGHT RULES

8.8.1. All Operations

8.8.1.1. Operation of Aircraft on the Ground

(*a*) No person may taxi an aircraft on the movement area of an aerodrome unless the person at the controls—

(1) Has been authorised by the owner, the lessee, or a designated agent ;

(2) Is fully competent to taxi the aircraft ;

(3) Is qualified to use the radio if radio communications are required ; and

(4) Has received instruction from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aircraft movement at the aerodrome.

(*b*) No person shall cause a helicopter rotor to be turned under power unless there is a qualified pilot at the controls.

(*c*) No person shall taxi an aircraft under the guidance of a signalman unless—

(1) The standard marshalling signals to the aircraft are provided in a clear and precise manner using the signals as prescribed by the Authority in IS : 8.8.2.11.

(2) The signalman is wearing a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation ; and

(3) The signalman and all participating ground staff are using daylight-fluorescent wands, table-tennis bats or gloves for all signaling during daylight hours and illuminated wands at night or in low visibility.

8.8.1.2. Takeoff Conditions

(*a*) Before commencing takeoff, a PIC shall ensure that—

(1) According to the available information, the weather at the aerodrome and the condition of the runway intended to be used will allow for a safe takeoff and departure ; and

(2) The RVR or visibility in the takeoff direction of the aircraft is equal to or better than the applicable minimum.

8.8.1.3. Flight Into Known or Expected ICING.

(*a*) No person may take off an aircraft or continue to operate an aircraft en route when icing conditions are expected or encountered, without ensuring that the aircraft is certified for icing operations and has sufficient operational de-icing or anti-icing equipment.

(*b*) No person may take off an aircraft when frost, ice or snow is adhering to the wings, control surfaces, propellers, engine inlets or other critical surfaces of the aircraft which might adversely affect the performance or controllability of the aircraft.

(*c*) For commercial air transport operations, no person may take off an aircraft when conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless the aircraft has been inspected for icing, and the procedures approved for the AOC holder by the Authority are followed to ensure ground de-icing and anti-icing is accomplished.

8.8.1.4. Altimeter Settings.

(*a*) Each person operating an aircraft, except a balloon or glider, shall maintain the cruising altitude or flight level by reference to an altimeter setting.

(*b*) The lowest usable flight level is determined by the atmospheric pressure in the area of operation.

(*c*) The flightcrew shall use the altimeter settings provided by the ATC service of Nigeria.

Note : In areas of the world where it may not be possible to get an altimeter setting, reference the State's procedures in the AIP.

8.8.1.5. Minimum Safe Altitudes-general

(*a*) Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes :

(1) Anywhere. An altitude allowing, if a power unit fails, continuation of flight or an emergency landing without undue hazard to persons or property on the surface.

(2) Over congested areas. Over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 300 m (1000 ft) above the highest obstacle within a horizontal radius of 600 m (2000 ft) of the aircraft.

(3) Over other than congested areas. An altitude of 150 m (500 ft) above the surface, except over open water or sparsely populated areas where the aircraft may not be operated closer than 150 m (500 ft) to any person, vessel, vehicle, or structure.

(4) Helicopters. Pilots of helicopters are not subject to the proximity restrictions provided they are operated in a manner that is not hazardous to persons and property on the surface. The PIC of a helicopter shall comply with any routes or altitudes for the area that are prescribed for helicopters by the Authority.

(5) Altitudes prescribed by ICAO *Annex* 2: 3.1.2, 4.6; 5.1.2

8.8.1.6. Minimum Safe VFR Altitudes

(*a*) Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes :

(1) No person may operate an aeroplane during the day, under VFR, at an altitude less than 300 m (1000 ft) above the surface or within 300 m (1000 ft) of any mountain, hill, or other obstruction to flight.

(2) No person may operate an aeroplane at night, under VFR, at an altitude less than 300 m (1000 ft) above the highest obstacle within a horizontal distance of 8 km (5 statute miles) from the centre of the intended course, or, in designated mountainous areas, less than 600 m (2000 ft) above the highest obstacle within a horizontal distance of 8 km (5 statute miles) from the centre of the intended course.

8.8.1.7. Instrument Approach Operating Minima.

(*a*) No person may operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, unless that State specifically approves that operation in accordance with the provisions of Implementing Standard : IS : 8.8.1.7.

(*b*) No person may conduct instrument approach and landing operations below 800 m (2600 ft) visibility unless RVR information is provided.

(*c*) The State of the Operator shall require that the operator establish heliport operating minima for each heliport to be used in operations and shall approve the method of determination of such minima. Such minima shall not be lower than any that may be established for such heliports by the State in which the heliport is located, except when specifically approved by that State.

(*d*) Instrument approach operations shall be classified based on the designed lowest operating minima below which an approach operation shall only be continued with the required visual reference as follows :

(1) *Type A* : a minimum descent height or decision height at or above 75 m (250 ft) ; and

(2) *Type B* : a decision height below 75 m (250 ft). Type B instrument approach operations are categorized as :

(*i*) Category I (CAT I) : a decision height not lower than 60 m (200 ft) with either a visibility not less than 800 m or a runway visual range not less than 550 m ;

(*ii*) Category II (CAT II) : a decision height lower than 60 m (200 ft) but not lower than 30 m (100 ft) and a runway visual range not less than 300 m ;

(*iii*) Category IIIA (CAT IIIA) : a decision height lower than 30 m (100 ft) or no decision height and a runway visual range not less than 175 m ;

(*iv*) Category IIIB (CAT IIIB) : a decision height lower than 15m (50 ft) or no decision height and a runway visual range less than 175 m but not less than 50 m ; and,

(*v*) Category IIIC (CAT IIIC) : no decision height and no runway visual range limitations.

(*e*) The operating minima for 2D instrument approach operations using instrument approach procedures shall be determined by establishing a minimum descent altitude (MDA) or minimum descent height (MDH), minimum visibility and, if necessary, cloud conditions.

(*f*) The operating minima for 3D instrument approach operations using instrument approach procedures shall be determined by establishing a decision altitude (DA) or decision height (DH) and the minimum visibility or RVR.

Note 1 : Where DH and RVR fall into different categories of operation, the instrument approach operation would be conducted in accordance with the requirements of the most demanding category (e.g., an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation).

8.8.1.8. Category II and III Operations-General Operating Rules.

(*a*) No person may operate a civil aircraft in a Category II or III operation unless—

(1) The PIC and CP of the aircraft hold the appropriate authorisations and ratings prescribed in Part 2.

(2) Each flight crewmember has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used ; and

(3) The instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight control guidance system that is being used.

(*b*) Unless otherwise authorised by the Authority, no person may operate a civil aircraft in a Category II or Category III operation unless each ground component required for that operation and the related airborne equipment is installed and operating.

(*c*) When the approach procedure being used provides for and requires the use of a DH, the authorised DH is the highest of the following :

(1) The DH prescribed by the approach procedure.

(2) The DH prescribed for the PIC.

(3) The DH for which the aircraft is equipped.

(*d*) Unless otherwise authorised by the Authority, no pilot operating an aircraft in a Category II or Category III approach that provides and requires use of a DH may continue the approach below the authorised decision height unless the following conditions are met :

(1) The aircraft is in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres, and where that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing.

(2) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot :

(*i*) The approach light system, except that the pilot may not descend below 30 m (100 ft) above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.

(*ii*) The threshold.

(*iii*) The threshold markings.

(*iv*) The threshold lights.

(*v*) The touchdown zone or touchdown zone markings.

(*vi*) The touchdown zone lights.

(*e*) Unless otherwise authorised by the Authority, each pilot operating an aircraft shall immediately execute an appropriate missed approach whenever, before touchdown, the requirements of paragraph (*d*) of this section are not met.

(*f*) No person operating an aircraft using a Category III approach without DH may land that aircraft except in accordance with the provisions of the letter of authorisation issued by the Authority.

(*g*) No person may conduct Category II or III instrument approaches and landing operations below 800 m (2600 ft) visibility unless RVR information is provided.

(*h*) Paragraphs (*a*) through (*g*) of this section do not apply to operations conducted by AOC holders issued a certificate under Part 9. No person may operate a civil aircraft in a CAT II or CAT III operation conducted by an AOC holder unless the operation is conducted in accordance with that AOC holder's approved training programme and operations specifications.

Note 1 : Category II approval is required to prior to obtaining Category III approval.

8.8.1.9. Category II and Category III Manual.

(*a*) Except as provided in paragraph (*c*) of this section, no person may operate a civil aircraft in a Category II or a Category III operation unless—

(1) There is available in the aircraft a current and approved Category II or Category III Manual, as appropriate, for that aircraft ;

(2) The operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual ; and

(3) The instruments and equipment listed in the manual that are required for a particular Category II or Category III operation have been inspected and maintained in accordance with the maintenance programme contained in the manual.

(*b*) Each operator must keep a current copy of each approved manual at its principal base of operations and must make each manual available for inspection upon request by the Authority.

(*c*) Paragraphs (*a*) and (*b*) do not apply to operations conducted by an AOC holder issued a certificate under Part 9, which will have approved Category II or III operations included as a part of its operations manual.

(*d*) IS : 8.8.1.9 provides specific Category II and III Manual requirements.

Note 1 : Category II approval is required to prior to obtaining Category III approval.

8.8.1.10. Exemption From Certain Category II Operations.

(*a*) The Authority may grant an exemption from the requirements of Subsections 8.8.1.8 and 8.8.1.9 for the operation of small aircraft Category II operations if the operator can demonstrate to the Authority that the proposed operation can be safely conducted.

Note : Such authorisation does not permit operation of the aircraft carrying persons or property for compensation or hire.

8.8.1.11. Diversion Decision-Engine Inoperative

(*a*) Except as provided in paragraph (b), the PIC shall land the aircraft at the nearest suitable aerodrome at which a safe landing can be made whenever an engine of an aircraft fails or is shut down to prevent possible damage.

(*b*) If not more than one engine of an aeroplane having three or more engines fails, or its rotation is stopped, the PIC may proceed to an aerodrome if he or she decides that proceeding to that aerodrome is as safe as landing at the nearest suitable aerodrome after considering the—

(1) Nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued ;

(2) Altitude, mass, and usable fuel at the time of engine stoppage ;

(3) Weather conditions en route and at possible landing points ;

(4) Air traffic congestion ;

(5) Kind of terrain ; and

(6) Familiarity with the aerodrome to be used

8.8.1.12. Operating Near other Aircraft-Including Formation Flights.

(*a*) No person may operate an aircraft so close to another aircraft as to create a collision hazard.

(*b*) No person may operate an aircraft in formation flight except—

(1) By arrangement with the PIC of each aircraft in the formation, and

(2) If in controlled airspace, in accordance with conditions prescribed by the appropriate air traffic authority, which includes that :

(*i*) The formation operates as a single aircraft with regard to navigation and position reporting ;

(*ii*) Separation between aircraft in the flight shall be the responsibility of the flight leader and the pilots in command of the other aircraft in flight ;

(*iii*) Separation between aircraft shall include periods of transition when aircraft are maneuvering to attain their own separation within the formation and during join-up and break-away ; and

(*iv*) A distance not exceeding 1 km (1/2nautical mile) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.

(*c*) No person may operate an aircraft, carrying passengers for hire, in formation flight.

8.8.1.13. Right-of-way Rules-except Water Operations.

(*a*) General.

(1) Each pilot shall maintain vigilance so as to see and avoid other aircraft ; and

(2) When a rule of this subsection gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear and taking into account the effect of aircraft wake turbulence.

(3) Each pilot who has the right-of-way shall maintain his or her heading and speed but is still responsible for taking such action, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert collision.

(*b*) In distress. An aircraft in distress has the right-of-way over all other air traffic.

(*c*) Converging.

(1) When aircraft of the same category are converging at approximately the same altitude (except head-on, or nearly so), the aircraft to the other's right has the right-of-way.

(2) If the converging aircraft are of different categories—

(*i*) A balloon has the right-of-way over any other category of aircraft ;

(*ii*) A glider has the right-of-way over an airship, and power driven heavier than air aircraft ; and

(*iii*) An airship has the right-of-way over a power driven heavier than air aircraft.

(*d*) Towing or refueling. An aircraft towing or refueling other aircraft has the right-of- way over all other engine-driven aircraft, except aircraft in distress.

(*e*) Approaching head-on. When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.

(*f*) Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft, whether climbing, descending or in horizontal flight, shall alter course to the right to pass well clear.

(*g*) Landing. Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface.

(*h*) More than one landing aircraft. When two or more aircraft are approaching an aerodrome for the purpose of landing, the aircraft at the lower altitude has the right-of-way.

(*i*) The PIC shall not take advantage of the right of way landing rules in items (*g*) and (*h*) in this paragraph to cut in front of another aircraft that is on final approach to land or to overtake that aircraft.

(*j*) Emergency landing. Aircraft that are compelled to land have the right-of-way over other aircraft.

(*k*) Taking off. Aircraft taking off have the right-of-way over aircraft taxiing on the manoeuvring area of an aerodrome.

(*l*) Surface movement of aircraft.

(1) Approaching head-on. When aircraft are approaching each other head-on, or approximately so, each pilot of each aircraft shall stop, or wherever practicable alter course to the right so as to keep well clear.

(2) Converging. When aircraft are converging on a course, the aircraft to the other's right has the right-of-way.

(3) Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall keep well clear.

(*m*) Aircraft taxiing on the manoeuvring area of an aerodrome.

(1) An aircraft taxiing on the manoeuvring area shall stop and hold at all runway-holding positions unless otherwise authorised by the aerodrome control tower.

(2) An aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars and may proceed further when the lights are switched off.

8.8.1.14. Right-of-way Rules-Water Operations.

(*a*) General. Each person operating an aircraft on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation, and shall give way to any vessel or other aircraft that is given the right-of-way by any rule of this subsection.

(*b*) Converging or Crossing. When aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other's right has the right-of-way.

(*c*) Approaching head-on. When aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.

(*d*) Overtaking. Each aircraft or vessel that is being overtaken has the right-of-way, and the one overtaking shall alter course to keep well clear.

(*e*) Special circumstances. When aircraft, or an aircraft and a vessel, approach so as to involve risk of collision, each aircraft or vessel shall proceed with careful regard to existing circumstances, including the limitations of the respective craft.

(*f*) Landing and taking off. When aircraft, on landing or taking off from the water, shall keep well clear of all vessels and avoid impeding their navigation.

8.8.1.15. Use of Aircraft Lights

(*a*) If an aircraft has red rotating beacon lights, or other lights installed to show that the engine is running, the pilot shall switch those lights on before starting engines and display those lights at all times the engines are running.

(*b*) No person may operate an aircraft between the period from sunset to sunrise unless—

(1) It has lighted navigation lights ; and

(2) If anti-collision lights are installed, those lights are lighted.

(*c*) No person may park or move an aircraft between the period from sunset to sunrise in, or in a dangerous proximity to, a movement area of an aerodrome, unless the aircraft—

(1) Is clearly illuminated ;

(2) Has lighted navigation lights, or

(3) Is in an area that is marked by obstruction lights, or

(4) Has lights to indicate when the engine is running.

(*d*) No person may anchor an aircraft unless that aircraft—

(1) Has lighted anchor lights ; or

(2) Is in an area where anchor lights are not required on vessels.

(*e*) No person may operate an aircraft on water during the period from sunset to sunrise unless—

(1) It displays lights as required by the International Regulations for Preventing Collisions at Sea (most recent edition) ; or

(2) It shall display lights as similar as possible in characteristics and position to those required by the International Regulations for Preventing Collisions at Sea if it is not practical to display the lights exactly as required.

(*f*) A pilot is permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of this paragraph if they do or are likely to—

(1) Adversely affect the satisfactory performance of duties ; or

(2) Subject an outside observer to harmful dazzle.

8.8.1.16. Simulated Instrument Flight.

(*a*) No person may operate an aircraft in simulated instrument flight unless—

(1) That aircraft, has fully functioning dual controls, except—

(*i*) In the case of airships, or

(*ii*) In a single engine airplane equipped with a throwover control wheel in place of fixed, dual controls of the elevator and ailerons.

(2) The other control seat is occupied by a safety pilot who holds at least a private pilot licence with category and class ratings appropriate to the aircraft being flown.

(3) The safety pilot has adequate vision forward and to each side of the aircraft, or a competent observer in the aircraft adequately supplements the vision of the safety pilot.

(*b*) No person may engage in simulated instrument flight conditions during commercial air transport operations.

8.8.1.17. Inflight Simulation of Abnormal Situations.

No person may simulate an abnormal or emergency situation during commercial air transport operations.

8.8.1.18. Dropping, Spraying, Towing.

(*a*) Except under conditions prescribed by the Authority, no pilot may take the following actions—

(1) Dropping, dusting or spraying from an aircraft ;

(2) Towing of aircraft or other objects ; or

(3) Allowing parachute descents.

8.8.1.19. Aerobatic Flight.

(*a*) No person may operate an aircraft in aerobatic flight—

(1) Over any city, town or settlement ;

(2) Over an open air assembly of persons ;

(3) Within the lateral boundaries of the surface areas of Class B, C, D or E airspace designated for an aerodrome ;

(4) Below an altitude of 450 m (1500 ft) above the surface ;

(5) When the flight visibility is less than 5 km (3 statute miles) ; and

(6) Unless in compliance with any other conditions prescribed by the Authority.

(*b*) No person may operate an aircraft in manoeuvres exceeding a bank of 60 degrees or pitch of 30 degrees from level flight attitude unless all occupants of the aircraft are wearing parachutes packed by a qualified parachute rigger, licensed in accordance with Part 2 of these regulations, in the past 12 calendar-months.

8.8.1.20. Flight Test Areas.

(*a*) No person may flight-test an aircraft except over open water, or sparsely populated areas having light traffic.

8.8.1.21. Prohibited Areas and Restricted Areas.

(*a*) No person may operate an aircraft in a prohibited area, or in restricted areas, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

8.8.1.22. Operations in MNPS or RVSM Airspace.

(*a*) No person may operate a civil aircraft of Nigeria registry in the North Atlantic airspace designated as MNPS airspace or in airspace designated as RVSM without a written authorisation issued by the Authority.

(*b*) No person may operate an aircraft in MNPS or RVSM airspace, except in accordance with the conditions of the procedures and restrictions required for this airspace.

Note : Nig. CARs Part 7 contains requirements regarding navigation equipment for operations in MNPS and RVSM airspace.

8.8.1.23. Operations on or in the Vicinity of a Controlled or an Uncontrolled Aerodrome.

(*a*) When approaching to land at an aerodrome, each pilot of :

(1) An aeroplane shall make all turns of that aeroplane to the left; or to the right, if appropriately indicated by the authorities having jurisdiction over that aerodrome ;

(2) A helicopter shall avoid the flow of aeroplanes.

(*b*) When departing an aerodrome, each pilot of an aircraft shall comply with any traffic patterns established by the authorities having jurisdiction over that aerodrome.

(*c*) Each pilot of an aircraft shall land and takeoff into the wind unless safety, the runway configurations, or traffic considerations determine that a different direction is preferable.

(*d*) Each pilot operating an aircraft either on or in the vicinity of an aerodrome shall :

(1) Observe other aerodrome traffic for the purpose of avoiding collision ; and

(2) Conform with or avoid the pattern of traffic formed by other aircraft in operation.

(*e*) Each pilot of an aircraft when operating to, from, or through an aerodrome having an operational control tower shall also comply with the requirements at Subsection 8.8.2.8.

(*f*) Aerodrome traffic management at controlled and uncontrolled aerodromes may be supplemented or directed by the use of universal aviation signals, such as the light displays and visual markings described in IS: 8.8.2.11.

8.8.1.24. Aerodrome Traffic Pattern Altitudes-Turbojet, Turbofan, or Large Aircraft.

(*a*) When arriving at an aerodrome, the PIC of a turbojet, turbofan, or large aircraft shall enter the traffic pattern at least 450 m (1500 ft) AGL until further descent is required for landing.

(*b*) When departing, the PIC of a turbojet, turbofan, or large aircraft shall climb to 450 m (1500 ft) AGL as rapidly as practicable.

8.8.1.25. Compliance with Visual and Electronic Glide Slopes.

(*a*) The PIC of an aeroplane approaching to land on a runway served by a visual approach slope indicator shall maintain an altitude at or above the glide slope until a lower altitude is necessary for a safe landing.

(*b*) The PIC of a turbojet, turbofan, or large aeroplane approaching to land on a runway served by an ILS shall fly that aeroplane at or above the glide slope from the point of interception to the middle marker.

8.8.1.26. Restriction or Suspension of Operations : Commercial Air Transport.

(*a*) If a PIC or an AOC holder knows of conditions, including aerodrome and runway conditions, that are a hazard to safe operations, that person shall restrict or suspend all commercial air transport operations to such aerodromes and runways as necessary until those conditions are corrected.

8.8.1.27. Continuation of Flight when Destination Aerodrome is Temporarily Restricted-Commercial Air Transport.

(*a*) No PIC may allow a flight to continue toward any aerodrome of intended landing where commercial air transport operations have been restricted or suspended, unless :

(1) In the opinion of the PIC, the conditions that are a hazard to safe operations may reasonably be expected to be corrected by the ETA ; or

(2) There is no safer procedure.

8.8.1.28. Interception.

(*a*) When intercepted by a military or government aircraft, each PIC shall comply with the international standards when interpreting and responding to visual signals and communication as specified in IS : 8.8.1.28.

(*b*) No pilot may conduct an international flight unless the procedures and signals relating to interception of aircraft, as specified in IS: 8.8.1.28, are readily available on the flight deck.

8.8.1.29. Noise Abatement Procedures

(*a*) Each AOC holder shall operate its aircraft in accordance with the noise abatement procedures approved by the Authority.

(*b*) Unless otherwise directed by the Authority, the noise abatement procedures specified by an AOC holder for any one aeroplane type shall be the same for all aerodromes.

8.8.1.30. Single Pilot Operations-Aeroplane

(*a*) An aeroplane shall not be operated under the IFR or night by a single pilot unless approved by the State of the Operator.

(*b*) An aeroplane shall not be operated under IFR or at night by a single pilot unless ;

(1) the flight manual does not require a flight crew of more than one ;

(2) the aeroplane is propeller driven; turbine powered and complies with Subsection 8.7.2.2 (*e*)(1),

(3) the maximum approved passenger seating configuration is not more than nine, or the aeroplane is propeller driven, turbine powered and complies with Subsection 8.7.2.2(*e*)(2) and the maximum approved passenger seating configuration is more than nine ;

(4) the maximum certificated take-off mass does not exceed 5700 kg (12566 Ib) ;

(5) the aeroplane is equipped as described in Part 7 : 7.2.1.4 (*c*)(*e*) ;

(6) the pilot-in-command has satisfied the requirements of experience, training, checking, and recency described in Subsection8.10.1.41.

(*c*) Notwithstanding (*b*)(2) and (*b*)(3) above, the aeroplane shall be operated in compliance with Subsection 8.7.2.2(*a*).

(*d*) Any exemption for single pilot operations with more than nine passengers shall be authorized by the Authority in the operator's operations specifications, as required by Subsection 8.7.2.2(*e*)(2).

(*e*) If such operations are to be conducted outside of Nigeria, Nigeria shall have an arrangement with the States where the operations will be conducted.

8.8.1.31. Single Engine Aeroplane Operations.

(*a*) Except as provided in (*b*) and (*c*) single-engine aeroplanes, shall only be operated in conditions of weather and light, and over such routes and diversions therefrom, that permit a safe forced landing to be executed in the event of engine failure.

(*b*) In approving operations by single-engine turbine-powered aeroplanes, at night and/or in IMC, the State of the Operator shall ensure that the airworthiness certification of the aeroplane is appropriate and that the overall level of safety intended by the provisions of Nig. CARs Parts 5 and 8 is provided by ;

(1) the reliability of the turbine engine ;

(2) the operator's maintenance procedures, operating practices, flight dispatch procedures and crew training programmes ; and

(3) equipment, and other requirements provided in accordance with Subsection 8.7.2.3 and IS : 8.7.2.3

(*c*) All single-engine turbine-powered aeroplanes operated at night and/ or in IMC shall have an engine trend monitoring system, and those aeroplanes for which the individual certificate .of airworthiness is first issued on or after 1 January 2005 shall have an automatic trend monitoring system.

8.8.1.32. Aeroplane Operating Procedures for Rates of Climb and Descent

(*a*) Unless otherwise specified in an air traffic control instruction, to avoid unnecessary airborne collision avoidance system (ACAS II) resolution advisories in aircraft at or approaching adjacent altitudes or flight levels, operators should specify procedures by which an aeroplane climbing or descending to an assigned altitude or flight level, especially with an autopilot engaged, may do so at a rate less than 8 m (26 ft)/sec or 450 m (1500 ft)/ min (depending on the instrumentation available throughout the last 300 m (1000 ft) of climb or descent to the assigned level when the pilot is made aware of another aircraft at or approaching an adjacent altitude or flight level.

Note : Material concerning the development of these procedures is contained in the PANS-OPS (Doc8168) Volume I, Part III, Section 3, Chapter 3.

8.8.1.33. Remotely Piloted Aircraft (RPA)

(*a*) No person shall operate a RPA in a manner that would cause a hazard to persons, property or other aircraft.

(*b*) Operating Rules. A person operating a RPA shall comply with the general operating rules as listed below.

(1) A person operating an RPA, registered in Nigeria or holding an operator certificate from Nigeria, and its RPAS,

(*i*) Shall not operate in Nigeria without appropriate authorisations from the Authority and other relevant security agencies,

(*ii*) Shall not engage in international air navigation without appropriate authorisation from the State from which the take-off of the RPA is made.

(*iii*) Shall not operate across the territory of another State, without special authorisation issued by each State in which the flight is to operate, which shall be obtained prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned.

Note : This authorisation may be in the form of agreements between the States involved.

(*iv*) Shall not operate over the high seas without prior coordination with the appropriate ATS Authority, which shall be obtained prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned.

(*v*) Shall operate in accordance with conditions specified by the State of Registry, and the State of the Operator if different, and the State(s) in which the flight is to operate.

(*vi*) Shall ensure that the RPAS meets the performance and equipment carriage requirements for the specific airspace in which the flight is to operate.

(2) Once authorization has been received from the Authority, the operator.

(*i*) Shall file a flight plan prior to operation of a RPA.

(*ii*) Shall notify the Authority and ATC immediately in the event of a flight cancellation, and

(*iii*) Shall, in the case of changes to the proposed flight, submit such changes to the Authority for consideration.

(*c*) Certificates and Licences. No person may operate an RPA, registered in Nigeria or holding an operator certificate from Nigeria unless the RPA, RPAS and the remote pilot has obtained the proper approvals of the Authority, as listed below.

(1) An RPAS shall be approved, taking into account the interdependencies of the components, in accordance with Nig. CARs Part 5, including :

(*i*) A certificate of airworthiness for the RPA, and.

(*ii*) The associated RPAS components specified in the type design certificate and maintained in accordance with national regulations.

(2) An operator shall have an RPAS operator certificate issued in accordance with national regulations.

(3) Remote pilots shall be licensed or have their licences rendered valid in accordance with Nig. CARs Part 2.

(*d*) Request for Authorisation.

(1) The request for authorisation referred to in paragraph (b) above shall be made by providing the required information in the application form contained in IS 8.8.1.33 ;

(2) A request for authorization to operate an RPA in Nigeria shall be made by following the requirements in Nig. CARs Part 10.2.1.3 and providing the required information in the application form contained in Nig. CARs IS : 8.8.1.33.

8.8.1.34. Unmanned Free Balloons

(*a*) No person shall operate an unmanned free balloon in a manner that would cause a hazard to persons, property or other aircraft.

(*b*) Classification. Unmanned free balloons shall be classified as :

(1) *Light* : An unmanned free balloon which carries a payload or one or more packages with a combined mass of less than 4 kg(9 lb), unless qualifying as a heavy balloon below, or

(2) *Medium* : An unmanned free balloon which carries a payload of two or more packages with a combined mass of 4 kg (9 lb)or more, but less than 6 kg, unless qualifying as a heavy balloon ; or

(3) *Heavy* : An unmanned free balloon which carries a payload which :

(*i*) Has a combined mass of 6 kg (13 lb) or more ; or

(*ii*) Includes a package of 3 kg (6 lb) or more ; or

(*iii*) Includes a package of 2 kg (4 lb) or more with an area density of more than 13 g (28 lb) per square centimeter ; or

(*iv*) Uses a rope of other device for suspension of the payload that requires an impact force of 230N or more to separate the suspended payload from the balloon.

Note 1 : The area density referred to in 8.8.1.34(*b*)(3)(*iii*) is determined by dividing the total mass in grams of the payload package by the area in square centimeters of its smallest surface.

Note 2 : The impact force of 230 N referred to in 8.8.1.34(*b*)(1)(*iv*) and (*d*)(9) is a unit of measure of force equivalent to a breaking strain of greater than 50 lb.

(*c*) Operating Rules. No person may operate an unmanned free balloon—

(1) Unless it has received appropriate authorization from Nigeria ;

(2) Across the territory of another State without appropriate authorization from the other State concerned prior to the launching of the balloon ;

(3) Except in accordance with the conditions specified by the State of Registry and the State(s) to be overflown ;

(4) In such a manner that the balloon, or any part thereof, including its payload with the surface of the earth, creates a hazard to persons or property not associated with the operation.

(5) Over the high seas without prior coordination with the appropriate ATS Authority.

(*d*) Operating Limitations and Equipment Requirements. No person shall operate a unmanned balloon—

(1) Without authorization from the appropriate ATS Authority

(2) At or through any level below 18000 m (60000 ft) pressure-altitude at which :

(*i*) There are clouds or obscuring phenomena of more than 4 oktas coverage ; or

(*ii*) The horizontal visibility is less than 8 km (5 statute miles).

(3) By releasing it in a manner that will cause it to fly lower than 300 m (1000 ft) over the congested areas of cities, towns or settlements or in open-air assembly of persons not associated with the operation.

(4) Unless it is equipped with at least two payload flight-termination devices or systems, whether automatic or operated by telecommand, that operate independently of each other.

(5) That is polyethylene zero-pressure unless is it equipped with at least two methods, systems, devices or combinations thereof, that function independently of each other for terminating the flight of the balloon envelope ;

(6) Unless the balloon envelope is equipped with either a radar reflective device(s) or radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2 700 MHz frequency range, and/or the balloon is equipped with such other devices as will permit continuous tracking by the operator beyond the range of ground-based radar.

(7) In an area where ground-based SSR equipment is in use, unless it is equipped with a secondary surveillance radar transponder, with pressure-altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station ;

(8) In an area where ground-based ADS-B equipment is in use, unless it is equipped with an ADS-B transmitter, with pressure-altitude reporting capability, which is continuously operated or which can be turned on when necessary by the tracking station.

(9) With a trailing antenna with requires a force of more than 230 N to break it at any point unless the antenna has coloured pennants or streamers that are attached at not more than 15 m intervals ;

(10) Below 18000 m (60000 ft) pressure-altitude between sunset and sunrise or such other period between sunset and sunrise (corrected to the altitude of operations) as may be prescribed by the appropriate ATS Authority, unless the balloon and its attachments and payload, whether or not they become separated during the operations, are lighted ;

(11) That is equipped with a suspension device (other than a highly conspicuously coloured open parachute) more than15 m (50 ft) long between sunrise and sunset below 18000 m (60000 ft) pressure-altitude unless the suspension device is coloured in alternate bands of high conspicuity colours or has coloured pennants attached.

(*e*) Termination. The operator of an unmanned free balloon shall activate the appropriate termination device—

(1) When it becomes known that weather conditions are less than those prescribed for the operation ;

(2) If a malfunction or any other reason makes further operation hazardous to air traffic or to persons or property on the surface, or

(3) Prior to unauthorized entry into the airspace over another State's territory.

(*f*) Preflight Notification.

(1) No person shall operate a medium or heavy unmanned balloon unless he/she has made the appropriate notification to the ATS unit

(*i*) The preflight notification contained in (*b*) below at least seven days prior to the flight, and

(*ii*) Any changes in the pre-launch information no later than

(*A*) six hours before the estimated time of launch, or

(*B*) in the case of solar or cosmic disturbance investigations involving a critical time element, 30 minutes before the estimated time of launch.

(2) The preflight notification shall contain the following :

(*i*) Balloon flight identification or project code name ;

(*ii*) Balloon classification and description ;

(*iii*) SSR code, aircraft address or NDB frequency as applicable ;

(*iv*) Operator's name and telephone number ;

(*v*) Estimated time of launch (or time of commencement and completion of multiple launches) ;

(*vi*) Number of balloons to be launched and the scheduled interval between launches (if multiple launches) ;

(*vii*) Expected direction of ascent ;

(*viii*) Cruising level(s) (pressure-altitude) ;

(*ix*) The estimated elapsed time to pass 18000 m (60000 ft) pressure-altitude or to reach cruising level if at or below 18000 m (60000 ft) together with the estimated location or if the operation consists of continuous launchings, the time to be included is the estimated time at which the first and last in the series will reach the appropriate level ;

(*x*) The estimated date and time of termination of the flight and the planned location of the impact/recovery area.

(*A*) In the case of balloons carry out flights of long duration, such that the date and time of termination of the flight and the location of impact cannot be forecast with accuracy, the term "*long duration*" shall be used.

(*B*) If there is to be more than one location of impact/recover, each location is to be listed together with the appropriate estimated time of impact.

(*C*) If there is to be a series of continuous impacts, the time to be included is the estimated time of the first and the last in the series.

(*g*) Notification of launch. The operator of a medium or heavy unmanned free balloon shall, immediately after launch, notify the appropriate ATS unit of the following :

(1) Balloon flight Identification

(2) launch site ;

(3) Actual time of launch ;

(4) Estimate time at which 18000 m (60000 ft) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 18000 m (60000 ft) and the estimated location ; and

(5) Any changes to the information previously notified in the preflight notification information.

(*h*) Notification of cancellation. The operator shall notify the ATS until immediately of a cancellation of the launch of a medium or heavy unmanned free balloon for which a preflight plan has been filed.

(*i*) Position recording and reports.

(1) The operator of a heavy unmanned balloon shall monitor the flight path of the balloon and forward reports of the balloon's position to the ATS unit as follows—

(*i*) For operations at or below 18000 m (60000 ft) - every two hours ;

(*ii*) For operations above 18000 m (60000 ft) - every 24 hours, or

(*iii*) Immediately if the tracking of the balloon has been lost, providing

(*A*) the balloons last known position, and

(*B*) the re-establishment of tracking of the balloon.

(2) The operator of a heavy unmanned balloon shall forward to the ATS unit the following information regarding the balloon one hour before the beginning of the planned descent :

(*i*) The current geographical position ;

(*ii*) The current level (pressure-altitude) ;

(*iii*) The forecast time of penetration of 18000 m (60000 ft) pressure-altitude, if applicable ;

(*iv*) The forecast time and location of ground impact.

(3) The operator of a medium or heavy unmanned free balloon shall notify the appropriate ATS unit when the operation is completed.

8.8.1.35. Moored Balloons and Kites.

(*a*) *Applicability* : This sub-part applies to the operation of moored balloons and kites. However, a person operating a moored balloon or kite within a restricted area must comply with the following requirements and with any additional limitations imposed by the applicable Authority as appropriate.

(*b*) Operating limitations.

(1) Except as provided in paragraph (2) of this section, no person may operate a moored balloon or kite—

(*a*) Less than 500 feet from the base of any cloud ;

(*b*) More than 500 feet above the surface of the earth ;

(*c*) From an area where the ground visibility is less than three miles ; or

(*d*) Within five miles of the boundary of any airport.

(2) Paragraph (*a*) of this section does not apply to the operation of a balloon or kite below the top of any structure and within 250 feet of it, if that shielded operation does not obscure any lighting on the structure.

(*c*) Notice requirements.

No person may operate an unshielded moored balloon or kite more than 150 feet above the surface of the earth unless, at least 24 hours before beginning the operation, he gives the following information to the ATC facility that is nearest to the place of intended operation :

(1) The names and addresses of the owners and operators.

(2) The size of the balloon or the size and weight of the kite.

(3) The location of the operation.

(4) The height above the surface of the earth at which the balloon or kite is to be operated.

(5) The date, time, and duration of the operation.

(*d*) Lighting and marking requirements.

(1) No person may operate a moored balloon or kite, between sunset and sunrise unless the balloon or kite, and its mooring lines, are lighted so as to give a visual warning equal to that required for obstructions to air navigation as required in Parts 12 and 14 of these Regulations.

(2) No person may operate a moored balloon or kite between sunrise and sunset unless its mooring lines have colored pennants or streamers attached at not more than 50 foot intervals beginning at 150 feet above the surface of the earth and visible for at least one mile.

(*e*) Rapid deflation device.

No person may operate a moored balloon unless it has a device that will automatically and rapidly deflate the balloon if it escapes from its moorings. If the device does not function properly, the operator shall immediately notify the nearest ATC facility of the location and time of the escape and the estimated flight path of the balloon.

8.8.1.36. Performance Based Navigation (PBN) Operations.

(*a*) No person may engage in PBN operations in Nigeria airspace without a written authorisation issued by the Authority or by the State of the operator. The scope of the activity that the operator is authorised to conduct shall be documented and specified :

(1) For commercial operations, in the operations specifications associated to the air operator certificate

(2) For non-commercial operators, by a Letter of Authorisation

(*b*) No person may operate an aircraft in designated PBN airspace, except in accordance with the conditions of the procedures and restrictions required for this airspace.

Note : Nig. CARs Part 7 contains requirements regarding navigation equipment for PBN operations.

8.8.2. Control of Air Traffic

ATC Clearance.

8.8.2.1.—(*a*) Each PIC shall request an ATC clearance through the submission of a flight plan to an ATC facility, including potential re-clearance in flight.

(*b*) Each PIC shall obtain an ATC clearance before operating a controlled flight, or a portion of a flight as a controlled flight.

(*c*) Whenever an aircraft has requested a clearance involving priority, each PIC shall submit a report explaining the necessity for such priority, if requested by the appropriate ATC facility.

(*d*) No person operating an aircraft on a controlled aerodrome may taxi on the manoeuvring area or any runway without clearance from the aerodrome control tower.

8.8.2.2. Adherence to ATC Clearances.

(*a*) When an ATC clearance has been obtained, no PIC may deviate from the clearance, except in an emergency, unless he or she obtains an amended clearance.

Note 1 : A flight plan may cover only part of a flight, as necessary, to describe that portion of the flight or those manoeuvres which are subject to ATC. A clearance may cover only part of a current flight plan, as indicated in a clearance limit or by reference to specific manoeuvres such as taxiing, landing or taking off.

Note 2 : 8.8.2.2(*a*) does not prohibit a pilot from cancelling an IFR clearance when operating in VMC conditions or cancelling a controlled flight clearance when operating in airspace that does not required controlled flight.

(*b*) When operating in airspace requiring controlled flight, no PIC may operate contrary to ATC instructions, except in an emergency.

(*c*) Each PIC who deviates from an ATC clearance or instructions in an emergency, shall notify ATC of that deviation as soon as possible.

8.8.2.3. Communications

(*a*) Each person operating an aircraft on a controlled flight shall maintain a continuous listening watch on the appropriate radio frequency of, and establish two-way communication as required with, the appropriate ATC facility.

(*b*) Each person operating an aircraft on a controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC facility as soon as it ceases to be subject to ATC service.

8.8.2.4. Route to be Flown.

(*a*) Unless otherwise authorised or directed by the appropriate ATC facility, the PIC of a controlled flight shall, in so far as practicable—

(1) When on an established ATC route, operate along the defined centre line of that route ; or

(2) When on any other route, operate directly between the navigation facilities and/or points defining that route.

(*b*) The PIC of a controlled flight operating along an ATC route defined by reference to VORs shall change over for primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the change-over point, where established.

8.8.2.5. Inadvertent Changes

(*a*) A PIC shall take the following action in the event that a controlled flight inadvertently deviates from its current flight plan :

(1) Deviation from track. If the aircraft is off track, the PIC shall adjust the heading of the aircraft to regain track as soon as practicable.

(2) Variation in true airspeed. Each PIC shall inform the appropriate ATC facility if the average true airspeed at cruising level between reporting points varies from that given in the flight plan or is expected to vary by plus or minus 5 per cent of the true airspeed.

(3) Change in time estimate. Each PIC shall notify the appropriate ATC facility and give a revised estimated time as soon as possible if the time estimate for a reporting point, flight information region boundary, or destination aerodrome, whichever comes first, is found to be in excess of three minutes from that notified to ATC, or such other period of time as is prescribed by the Authority or on the basis of air navigation regional agreements.

(*b*) When an ADS agreement is in place, the air traffic services unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

8.8.2.6. ATC Clearance-Intended Changes.

(*a*) Requests for flight plan changes shall include the following information :

(1) Change of cruising level. Aircraft identification, requested new cruising level and cruising speed at this level, and revised time estimates, when applicable, at subsequent flight information region boundaries.

(2) Change of route :

(*i*) Destination unchanged. Aircraft identification, flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates, and any other pertinent information.

(*ii*) Destination change. Aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence; revised time estimates; alternate aerodrome(s); any other pertinent information.

8.8.2.7. Position Reports

(*a*) Each pilot of a controlled flight shall report to the appropriate ATC facility, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information, unless exempted from this requirement by the Authority.

(*b*) Each pilot of a controlled flight shall make position reports in relation to additional points or intervals when requested by the appropriate ATC facility.

(*c*) When operating via data link communications providing position information to the appropriate air traffic services unit, each pilot of a controlled flight shall only provide voice position reports when requested by the appropriate ATC facility.

8.8.2.8. Operations on or in the Vicinity of a Controlled Aerodrome

(*a*) No person may operate an aircraft to, from, through, or on an aerodrome having an operational control tower unless two-way communications are maintained between that aircraft and the control tower.

(*b*) On arrival, each PIC shall establish communications required by (*a*) prior to 7.4 km (4 nautical miles) from the aerodrome when operating from the surface up to and including 760 m(2500 ft).

(*c*) On departure, each PIC shall establish communications with the control tower before taxi.

(*d*) Takeoff, landing, taxi clearance. No person may, at any aerodrome with an operating control tower, operate an aircraft on a runway or taxiway or takeoff or land an aircraft, unless an appropriate clearance has been received by ATC.

(*e*) Communications failure. If the radio fails or two-way communication is lost, a PIC may continue a VFR flight operation and land if :

(1) The weather conditions are at or above basic VFR minimums ; and

(2) Clearance to land from the ATC tower is given in accordance with the universal light signals and acknowledged by the PIC as contained in IS : 8.8.2.11(*e*) and (*f*) for light signals and acknowledgement.

8.8.2.9. Unlawful Interference

(*a*) A PIC shall, when and if possible, notify the appropriate ATC facility when an aircraft is being subjected to unlawful interference, including—

(1) Any significant circumstances associated with the unlawful interference, and

(2) Any deviation from the current flight plan necessitated by the circumstances.

(*b*) A PIC shall attempt to land as soon as practicable when an aircraft is subjected to unlawful interference at :

(1) The nearest suitable aerodrome, or

(2) A dedicated aerodrome assigned by the appropriate Authority unless considerations aboard the aircraft dictate otherwise.

(*c*) No person shall aim laser beam at aircraft.

8.8.2.10. Time Checks

(*a*) Each PIC shall use Co-ordinated Universal Time (UTC), expressed in hours and minutes of the 24-hour day beginning at midnight, in flight operations.

(*b*) Each PIC shall obtain a time check before operating a controlled flight and at such other times during the flight as may be necessary.

(*c*) Whenever time is used in the application of data link communications, it shall be accurate to within one second of UTC.

8.8.2.11. Universal Signals

(*a*) Upon observing or receiving any of the designated universal aviation signals as contained in IS: 8.8.2.11 and IS: 8.8.1.28, each person operating an aircraft shall take such action as may be required by the interpretation of the signal.

(*b*) The universal aviation signals shall have only the meaning indicated in the implementing standard.

(*c*) Each person using universal signals in the movement of aircraft shall only use them for the purpose indicated.

(*d*) No person may use signals likely to cause confusion with universal aviation signals.

8.8.3. VFR Flight Rules.

8.8.3.1. Visual Meteorological Conditions

(*a*) No person may operate an aircraft under VFR when the flight visibility is less than, or at a distance from the clouds that is less than that prescribed, or the corresponding altitude and class of airspace in the following table

Airspace and VMC Minimums*			
Airspace Class	A***B C D E	F G	
		Above 900 m (3000 ft) AMSL or above 300m (1000 ft) above terrain, whichever is the higher.	At and below 900 m (3000 ft) AMSL or 300 m (I000 ft) above terrain, whichever is the higher.
Distance from cloud	1500 m (4920 ft) horizontally 300m (1000 ft) vertically		Clear of cloud and in sight of the surface.
Flight visibility	8 km (5 statute miles) at and above 3050 m (10000 ft) AMSL5 km (3 statute miles) below 3050m (10000 ft) AMSL.		5km(3 statute miles)**

*When the height of the transition altitude is lower than 3050 m (10000 ft) AMSL, FL 100 should be used in lieu of 10000 ft.

** When so prescribed by the Authority lower flight visibilities to 1500m (4920 ft) may be permitted for flights operating :

1. at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision ; or

2. in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.

Helicopters may be permitted to operate in less than 1500m(4920 ft)flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

***The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

8.8.3.2. VFR Weather Minimums for Takeoff and Landing.

(*a*) No person may land or takeoff an aircraft under VFR from an aerodrome located within a control zone, or enter the aerodrome traffic zone or traffic pattern airspace unless the—

(1) Reported ceiling is at least 450 m (1500 ft) ; and

(2) Reported ground visibility is at least 5 km (3 statute miles); or, except when a clearance is obtained from ATC.

(*b*) No person may land or takeoff an aircraft or enter the traffic pattern under VFR from an aerodrome located outside a control zone, unless VMC conditions are at or above those indicated in Subsection 8.8.3.1.

(*c*) The only exception to the required weather minimums of this subsection is during a Special VFR operation.

8.8.3.3. Special VFR Operations.

(*a*) No person may conduct a Special VFR flight operation to enter the traffic pattern, land or takeoff an aircraft under Special VFR from an aerodrome located in Class B, Class C, Class D or Class E airspace unless :

(1) Authorised by an ATC clearance ;

(2) The aircraft remains clear of clouds ; and

(3) The flight visibility is at least 1.5 km (1 statute mile).

(*b*) No person may conduct a Special VFR flight operation in an aircraft between sunset and sunrise unless :

(1) The PIC is current and qualified for IFR operations ; and

(2) The aircraft is qualified to be operated for IFR flight.

8.8.3.4. VFR Cruising Altitudes

(*a*) Each person operating an aircraft in level cruising flight under VFR at altitudes above 900 m (3000 ft) from the ground or water, shall maintain a flight level appropriate to the track as specified in the table of cruising levels in IS : 8.8.3.4 :

(*b*) Paragraph (*a*) does not apply when otherwise authorised by ATC, when operating in a holding pattern, or during maneuvering in turns.

8.8.3.5. ATC Clearances For VFR Flights.

(*a*) Each pilot of a VFR flight shall obtain and comply with ATC clearances and maintain a listening watch before and during operations :

(1) Within Classes B, C and D airspace ;

(2) As part of aerodrome traffic at controlled aerodromes ; and

(3) Under Special VFR.

8.8.3.6. VFR Flights Requiring ATC Authorisation.

(*a*) Unless authorised by the Authority, no pilot may operate in VFR flight—

(1) Above FL 200 ; or

(2) At transonic and supersonic speeds.

(*b*) ATC authorisation for VFR flights may not be granted in areas where a VSM of only 300m (1,000 ft) is applied above FL 290.

(*c*) No person may operate in VFR flight between sunset and sunrise unless :

(1) Authorised by the Authority, and

(2) Operating in accordance with any conditions prescribed by the Authority.

8.8.3.7. Weather Deterioration Below VMC.

(*a*) Each pilot of a VFR flight operated as a controlled flight shall, when he or she finds it is not practical or possible to maintain flight in VMC in accordance with the ATC flight plan—

(1) Request an amended clearance enabling the aircraft to continue in VMC to its destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required ;

(2) If no clearance can be obtained, continue to operate in VMC and notify the appropriate ATC facility of the action being taken either to leave the airspace concerned or to land at the nearest suitable aerodrome ;

(3) Operating within a control zone, request authorisation to operate as a special VFR flight ; or

(4) Request clearance to operate in IFR, if currently rated for IFR operations.

8.8.3.8. Changing from VFR to IFR.

(*a*) Each pilot operating in VFR who wishes to change to IFR shall—

(1) If a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan ; or

(2) Submit a flight plan to the appropriate ATC facility and obtain a clearance before proceeding IFR when in controlled airspace.

8.8.3.9. Two-way Radio Communication Failure in VFR

(*a*) If radio failure occurs in VFR while under ATC control, or if VFR conditions are encountered after the failure, each pilot shall—

(1) Continue the flight under VFR ;

(2) Land at the nearest suitable aerodrome ; and

(3) Report arrival to ATC by the most expeditious means possible.

8.8.4. IFR Flight Rules.

8.8.4.1. Applicability

(*a*) All aircraft operated in accordance with instrument flight procedures shall comply with the instrument flight rules, and the aerodrome instrument approach procedures approved by the NIGERIA where the operation will take place.

8.8.4.2. IFR in Controlled Airspace

(*a*) No person may operate an aircraft in controlled airspace under IFR unless that person has—

(*b*) Filed an IFR flight plan ; and

(*c*) Received an appropriate ATC clearance.

8.8.4.3. IFR Flights Outside Controlled Airspace.

(*a*) Each PIC of an IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the Authority, shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the ATC facility providing flight information service.

(*b*) Each PIC of an IFR flight operating outside controlled airspace for which the Authority requires a flight plan, a listening watch on the appropriate radio frequency and establishment of two-way communication, as necessary, with the ATC facility providing flight information service, shall report position as specified for controlled flights.

8.8.4.4. IFR Takeoff Minimums for Commercial Air Transport.

(*a*) Unless otherwise authorised by the Authority, no pilot operating an aircraft in commercial air transport operations may accept a clearance to take off from a civil aerodrome under IFR unless weather conditions are at or above :

(1) For aircraft, other than helicopters, having two engines or less-1,500 m (1 statute mile) visibility.

(2) For aircraft having more than two engines-800 m (1/2 statute mile) visibility.

(3) For helicopters-800 m (1/2 statute mile) visibility.

8.8.4.5. Minimum Altitudes for IFR Operations.

(*a*) Operation of aircraft at minimum altitudes. Except when necessary for takeoff or landing, no person may operate an aircraft under IFR below—

(1) The applicable minimum altitudes prescribed by the authorities having jurisdiction over the airspace being overflown ; or

(2) If no applicable minimum altitude is prescribed by the authorities—

(*i*) Over high terrain or in mountainous areas, at a level which is at least 600 m (2000 ft) above the highest obstacle located within 8 km (5 statute miles) of the estimated position of the aircraft ; and

(*ii*) Elsewhere than as specified in paragraph (*i*), at a level which is at least 300 m (I000 ft) above the highest obstacle located within 8 km (5 statute miles) of the estimated position of the aircraft.

(3) If an MEA and a MOCA are prescribed for a particular route or route segment, a person may operate an aircraft below the MEA down to, but not below, the MOCA, when within 40.7 km (22 nautical miles) of the VOR concerned.

(*b*) Climb for obstacle clearance.

(1) If unable to communicate with ATC, each pilot shall climb to a higher minimum IFR altitude immediately after passing the point beyond which that minimum altitude applies.

(2) If ground obstructions intervene, each pilot shall climb to a point beyond which that higher minimum altitude applies, at or above the applicable Minimum Crossing Altitude.

(*c*) The State of the Operator shall approve such method only after careful consideration of the probable effects of the following factors on the safety of the operation in question :

(1) The accuracy and reliability with which the position of the helicopter can be determined ;

(2) The inaccuracies in the indications of the altimeters used ;

(3) The characteristics of the terrain (e.g. sudden changes in the elevation) ;

(4) The probability of encountering unfavourable meteorological conditions (e.g. severe turbulence and descending air currents) ;

(5) Possible inaccuracies in aeronautical charts ; and

(6) Airspace restrictions.

8.8.4.6. Minimum Altitudes for use of an Autopilot.

(*a*) For en route operations, no person may use an autopilot at an altitude above the terrain that is less than 152 m (500 ft).

(*b*) For instrument approach operations, no person may use an autopilot at an altitude above the terrain that is less than 15 m (50 ft) below the MDA or DH.

(*c*) For CAT III approaches, the Authority may approve the use of a flight control guidance system with automatic capability to touchdown.

8.8.4.7. IFR Cruising Altitude or Flight Level in Controlled Airspace.

(*a*) Each person operating an aircraft under IFR in level cruising flight in controlled airspace shall maintain the altitude or flight level assigned that aircraft by ATC.

(*b*) Each person operating an aircraft in level cruising flight under IFR, or if authorised to employ cruise climb techniques between two levels, shall maintain a flight level appropriate to the track as specified in the table of cruising levels in IS : 8.8.3.4 or according to a modified table of cruising levels when so prescribed in accordance with IS: 8.8.3.4 for flight above FL 410.

(*c*) Paragraph (*c*) above does not apply when otherwise authorised by ATC or specified by the Authority in Aeronautical Information Publications.

Note : The requirements for VFR cruising altitudes are in Subsection 8.8.3.4.

8.8.4.8. IFR Cruising Altitude or Flight Level in Uncontrolled Airspace.

(*a*) Each person operating an aircraft in level cruising flight under IFR, outside of controlled airspace, shall maintain a flight level appropriate to the track as specified in the table of cruising levels in IS : 8.8.3.4 or according to a modified table of cruising levels when so prescribed in accordance with IS : 8.8.3.4 for flight above FL 410.

(*b*) A person may deviate from the cruising altitudes specified in paragraph (*a*) only when—

(1) Authorised by ATC for flight at or below 900 m (3000 ft) above MSL ; or

(2) When otherwise authorised by ATC.

8.8.4.9. IFR Radio Communications

(*a*) Each PIC of an aircraft operated under IFR in controlled airspace shall have a continuous watch maintained on the appropriate frequency and shall report by radio as soon as possible—

(1) The time and altitude of passing each designated reporting point, or the reporting points specified by ATC, except that while the aircraft is under radar control, only the passing of those reporting points specifically requested by ATC need be reported ;

(2) Any unforecast weather conditions encountered ; and

(3) Any other information relating to the safety of flight, such as hazardous weather or abnormal radio station indications.

8.8.4.10. Operation Under IFR in Controlled Airspace-malfunction Reports.

(*a*) The PIC of each aircraft operated in controlled airspace under IFR shall report as soon as practical to ATC any malfunctions of navigational, approach, or communication equipment occurring in flight.

(*b*) In each report specified in paragraph (a), the PIC shall include the—

(1) Aircraft identification ;

(2) Equipment affected ;

(3) Degree to which the capability of the pilot to operate under IFR in the ATC system is impaired ; and

(4) Nature and extent of assistance desired from ATC.

8.8.4.11. Continuation of IFR Flight Toward a Destination.

(*a*) No pilot may continue an IFR flight toward an aerodrome or heliport of intended landing, unless the latest available meteorological information indicates that the conditions at that aerodrome, or at least one destination alternate aerodrome will, at the expected time of arrival, be at or above the specified instrument approach minima.

8.8.4.12. Instrument Approach Procedures and IFR Landing Minimums.

(*a*) No person may make an instrument approach at an aerodrome except in accordance with IFR weather minimums and instrument approach procedures established for that aerodrome as set forth by the Authority.

(*b*) No AOC holder may make an instrument approach at an aerodrome except as set forth in the AOC holder's operations specifications.

8.8.4.13. Commencing an Instrument Approach.

(*a*) No pilot may continue an approach below 300 m (1,000 ft.) above the aerodrome elevation or into the final approach segment unless—

(1) A source approved by the Authority issues a weather report for that aerodrome ; and

(2) The latest weather report for that aerodrome reports the visibility or controlling RVR to be equal to or more than the minimums prescribed for that procedure.

(*b*) If a pilot begins the final approach segment of an instrument approach procedure and subsequently receives a weather report indicating below-minimum conditions, the pilot may continue the approach to DH or MDA.

8.8.4.14. Instrument Approaches to Civil Aerodromes

(*a*) Each person operating a civil aircraft shall use a standard instrument approach procedure prescribed by the authorities having jurisdiction over the aerodrome, unless otherwise authorised by the Authority.

(*b*) Authorised DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of a DH or MDA, the authorised DH or MDA is the highest of the following :

(1) The DH or MDA prescribed by the approach procedure.

(2) The DH or MDA prescribed for the PIC.

(3) The DH or MDA for which the aircraft is equipped.

8.8.4.15. Operation Below DH or MDA

(*a*) Where a DH or MDA is applicable, no pilot may operate a civil aircraft at any aerodrome or heliport below the authorised MDA, or continue an approach below the authorised DH unless—

(1) The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres ;

(2) For commercial air transport operations, a descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing ;

(3) The reported flight visibility is not less than the visibility prescribed in the standard instrument approach being used or the controlling RVR is above the specified minimum ; and

(4) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot—

(*i*) The approach light system, except that the pilot may not descend below 30 m (100 ft) above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.

(*ii*) The threshold ;

(*iii*) The threshold markings ;

(*iv*) Threshold lights ;

(*v*) The runway end identifier lights ;

(*vi*) The visual approach slope indicator ;

(*vii*) The touchdown zone or touchdown zone markings ;

(*viii*) The touchdown zone lights ;

(*ix*) The runway or runway markings ; or

(*x*) The runway lights.

8.8.4.16. Landing During Instrument Meteorological Conditions.

(*a*) No pilot operating a civil aircraft may land that aircraft when the flight visibility is less than the visibility prescribed in the standard instrument approach procedure being used.

8.8.4.17. Execution of a Missed Approach Procedure.

(*a*) Each pilot operating a civil aircraft shall immediately execute an appropriate missed approach procedure when either of the following conditions exists :

(1) Whenever the required visual reference criteria is not met in the following situations :

(*i*) When the aircraft is being operated below MDA ; or

(*ii*) Upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown.

(2) Whenever an identifiable part of the aerodrome is not distinctly visible to the pilot during a circling manoeuvre at or above MDA, unless the inability to see an identifiable part of the aerodrome results only from a normal bank of the aircraft during the circling approach.

8.8.4.18. Change from IFR Flight to VFR Flight

(*a*) An pilot electing to change from IFR flight to VFR flight shall notify the appropriate ATC facility specifically that the IFR flight is cancelled and then communicate the changes to be made to his or her current flight plan.

(*b*) When a pilot operating under IFR encounters VMC, he or she may not cancel the IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted VMC.

8.8.4.19. Two-way Radio Communications Failure in IFR.

(*a*) Communications Failure: General.

(1) In the event of communications failure, the pilot shall attempt to establish communications with the appropriate air traffic control unit using all other available means.

(2) In addition, the pilot shall, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

(*b*) If radio failure occurs in VMC while under ATC control, or if VMC conditions are encountered after the failure, each pilot shall—

(1) Continue the flight under VMC ;

(2) Land at the nearest suitable aerodrome ; and

(3) Report arrival to the appropriate ATC services unit by the most expeditious means possible.

(*c*) If two-way radio communication failure occurs in IMC, or when the pilot of an IFR flight considers it inadvisable to continue the flight in VMC, the PIC shall :

(1) unless otherwise prescribed on the basis of regional air navigation agreement, in airspace where radar is not used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan ;

(2) in airspace where radar is used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 minutes following—

(*i*) The time the last assigned level or minimum flight altitude is reached ; or

(*ii*) The time the transponder is set to Code 7600 ; or

(*iii*) The aircraft's failure to report its position over a compulsory reporting point ; whichever is later, and thereafter adjust level and speed in accordance with the filed flight plan ;

(3) when being radar vectored or having been directed by ATC to proceed offset using area navigation (RNAV) without a specified limit, rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude ;

(4) proceed according to the current flight plan route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with (5) below, hold over this aid or fix until commencement of descent ;

(5) commence descent from the navigation aid of fix specified in (4) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to the estimated time of arrival resulting from the current flight plan ;

(6) complete a normal instrument approach procedure as specified for the designated navigation aid or fix ; and

(7) land, if possible, within 30 minutes after the estimated time of arrival specified in (5) or the last acknowledged expected approach time, whichever is later.

8.8.4.20. Treshold Crossing Height for 3D Instrument Approach Operations

(*a*) An operator shall establish operational procedures designed to ensure that an aeroplane being used to conduct 3D precision approach operations crosses the threshold by a safe margin with the aeroplane in the landing configuration and attitude.

8.9. Passengers and Passenger Handling

8.9.1. All Passenger Carrying Operations

8.9.1.1. Unacceptable Conduct

(*a*) No person on board may interfere with a crewmember in the performance of his or her duties.

(*b*) Each passenger shall fasten his or her seat belt and keep it fastened while the seat belt sign is lighted.

(*c*) No person on board an aircraft shall recklessly or negligently act or omit to act in such a manner as to endanger the aircraft or persons and property therein.

(*d*) No person may secrete himself or herself nor secrete cargo on board an aircraft.

(*e*) No person may smoke while the no-smoking sign is lighted.

(*f*) No person may smoke in any aeroplane lavatory.

(*g*) No person may tamper with, disable or destroy any smoke detector installed in any aeroplane lavatory.

8.9.1.2. Refuelling with Passengers Onboard

(*a*) No PIC may allow an aeroplane to be refuelled when passengers are embarking, on board or disembarking unless—

(1) The aeroplane is manned by qualified personnel ready to initiate and direct an evacuation ; and

(2) Two-way communication is maintained between the qualified personnel in the aeroplane and the ground crew supervising the refuelling.

(*b*) Helicopters. No PIC may allow a helicopter to be refuelled when passengers are embarking, on board, or disembarking; or the rotors are turning unless—

(1) The helicopter is manned by qualified personnel ready to initiate and direct an evacuation ; and

(2) Two-way communication is maintained between the qualified personnel in the helicopter and the ground crew supervising the refuelling.

8.9.1.3. Passenger Seats, Safety Belts, and Shoulder Harnesses.

(*a*) The PIC shall ensure that each person on onboard occupies an approved seat or berth with their own individual safety belt and shoulder harness (if installed) properly secured about them during takeoff and landing.

(*b*) Each passenger shall have his or her seatbelt securely fastened at any other time the PIC determines it is necessary for safety.

(*c*) A safety belt provided for the occupant of a seat may not be used during takeoff and landing by more than one person who has reached his or her second birthday.

Note : When cabin crewmembers are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted before takeoff.

8.9.1.4. Passenger Briefing

(*a*) The PIC shall ensure that crewmembers and passengers are made familiar, by means of an oral briefing or by other means, with the location and use of the following items, if appropriate-

(1) Seat belts ;

(2) Emergency exits ;

(3) Life jackets ;

(4) Oxygen dispensing equipment ; and

(5) Other emergency equipment provided for individual use, including passenger emergency briefing cards.

(*b*) The PIC shall ensure that all persons on board are aware of the locations and general manner of use of the principal emergency equipment carried for collective use.

(*c*) During takeoff and landing, and whenever by reason of turbulence or any emergency occurring during flight the precaution is considered necessary, cabin crewmembers shall ensure that all passengers aboard the aircraft fasten their seat belts so as to be secured in their seats.

(*d*) For helicopter off-shore operations, the PIC shall ensure that each occupant of the aircraft wear—

(1) A life jacket or integrated survival suit, when operating beyond autorotational distance from land ;

(2) A survival suit, when the sea temperature is less than 10?C or when the estimated rescue time exceeds the calculated survival time.

8.9.1.5. Inflight Emergency Instruction.

(*a*) In an emergency during flight, the PIC shall ensure that all persons on board are instructed in such emergency action as may be appropriate to the circumstances.

(*b*) When cabin crewmembers are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted.

(*c*) The PIC shall ensure that, during take-off and landing and whenever considered necessary by reason of turbulence or any emergency occurring during flight, all passengers on board a helicopter shall be secured in their seats by means of the seat belts or harnesses provided.

8.9.1.6. Passenger Oxygen-minimum Supply and use.

(*a*) The PIC shall ensure that breathing oxygen and masks are available to passengers in sufficient quantities for all flights at such altitudes where a lack of oxygen might harmfully affect passengers.

(*b*) The PIC shall ensure that the minimum supply of oxygen prescribed by the Authority is on board the aircraft.

(*c*) *Note* : The requirements for oxygen storage and dispensing apparatus are prescribed in Part 7.

(*d*) The PIC shall require all passengers to use oxygen continuously at cabin pressure altitudes above 4000 m (13000 ft).

(*e*) Safeguarding of cabin crew and passengers in pressurized aeroplanes in the event of loss of pressurization :

(1) Cabin crew shall be safeguarded so as to ensure reasonable probability of their retaining consciousness during any emergency descent which may be necessary in the event of loss of pressurization and, in addition, they shall have such means of protection as will enable them to administer first aid to passengers during stabilized flight following the emergency. Passengers shall be safeguarded by such devices or operational procedures as will ensure reasonable probability of their surviving the effects of hypoxia in the event of loss of pressurization.

8.9.1.7. Alcohol or Drugs

(*a*) No person may permit the boarding or serving of any person who appears to be intoxicated or who demonstrates, by manner or physical indications, that that person is under the influence of drugs (except a medical patient under proper care).

8.9.2. COMMERCIAL AIR TRANSPORT PASSENGER CARRYING OPERATIONS

8.9.2.1. Passenger Compliance With Instructions.

(*a*) Each passenger on a commercial air transport flight shall comply with instructions given by a crewmember in compliance with this section.

8.9.2.2. Denial of Transportation.

(*a*) An AOC holder may deny transportation because a passenger—

(1) Refuses to comply with the instructions regarding exit seating restrictions prescribed by the Authority ; or

(2) Has a handicap that can be physically accommodated only by an exit row seat.

8.9.2.3. Carriage of Persons Without Compliance with These Passenger-Carrying Requirements

(*a*) The passenger-carrying requirements of paragraph (b) do not apply when carrying—

(1) A crewmember not required for the flight ;

(2) A representative of the Authority on official duty ;

(3) A person necessary to the safety or security of cargo or animals ; or

(4) Any person authorised by the AOC holder's Operations Manual procedures, as approved by the Authority.

(*b*) No person may be carried without compliance to the passenger carrying requirements unless—

(1) There is an approved seat with an approved seat belt for that person ;

(2) That seat is located so that the occupant is not in any position to interfere with the flight crewmembers performing their duties ;

(3) There is unobstructed access from their seat to the flight deck or a regular or emergency exit ;

(4) There is a means for notifying that person when smoking is prohibited and when seat belts shall be fastened ; and

(5) That person has been orally briefed by a crewmember on the use of emergency equipment and exits.

8.9.2.4. Cabin Crew at Duty Stations.

(*a*) During taxi, cabin crewmembers shall remain at their duty stations with safety belts and shoulder harness fastened except to perform duties related to the safety of the aircraft and its occupants.

(*b*) During takeoff and landing, cabin crewmembers shall be located as near as practicable to required floor level exits and shall be uniformly distributed throughout the aircraft to provide the most effective egress of passengers in event of an emergency evacuation.

(*c*) When passengers are on board a parked aircraft, cabin crewmembers (or another person qualified in emergency evacuation procedures for the aircraft) will be placed in the following manner :

(1) If only one qualified person is required, that person shall be located in accordance with the AOC holder's Operations Manual procedures.

(2) If more than one qualified person is required, those persons shall be spaced throughout the cabin to provide the most effective assistance for the evacuation in case of an emergency.

8.9.2.5. Evacuation Capability

(*a*) The PIC, SCCM and other person assigned by the AOC holder shall ensure that, when passengers are on board the aircraft before movement on the surface, at least one floor-level exit provides for egress of passengers through normal or emergency means.

8.9.2.6. Arming of Automatic Emergency Exits.

(*a*) No person may cause an aeroplane carrying passengers to be moved on the surface, takeoff or land unless each automatically deployable emergency evacuation assisting means installed on the aircraft is ready for evacuation.

8.9.2.7. Accessibility of Emergency Exits and Equipment.

(*a*) No person may allow carry-on baggage or other items to block access to the emergency exits when the aircraft is moving on the surface, during takeoff or landing, or while passengers remain on board on the ground.

8.9.2.8. Stops Where Passengers Remain Onboard.

(*a*) At stops where passengers remain on board the aircraft, the PIC, the co-pilot, or both shall ensure that—

(1) All engines are shut down ;

(2) At least one floor level exit remains open to provide for the deplaning of passengers ; and

(3) There is at least one person immediately available who is qualified in the emergency evacuation of the aircraft and who has been identified to the passengers on board as responsible for the passenger safety.

(*b*) If refueling with passengers on board, the PIC or a designated company representative shall ensure that the AOC holder's Operations Manual procedures are followed.

8.9.2.9. Passenger Loading and Unloading-AOC

(*a*) No person shall allow passenger loading or unloading of a propeller driven aircraft unless all engines are shut down unless the aircraft is using a passenger jetway to load and unload.

8.9.2.10. Carriage of Persons with Reduced Mobility.

(*a*) No person may allow a person of reduced mobility to occupy seats where their presence could—

(1) Impede the crew in their duties ;

(2) Obstruct access to emergency equipment ; or

(3) Impede the emergency evacuation of the aircraft.

8.9.2.11. Exit Row Seating.

(*a*) No AOC holder shall allow a passenger to sit in an emergency exit row if the PIC or SCCM determine that it is likely that the passenger would be unable to understand and perform the functions necessary to open an exit and to exit rapidly.

(*b*) No cabin crewmember may seat a person in a passenger exit seat if it is likely that the person would be unable to perform one or more of the applicable functions listed below—

(1) The person lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs—

(*i*) To reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms ;

(*ii*) To grasp and push, pull, turn, or otherwise manipulate those mechanisms ;

(*iii*) To push, shove, pull, or otherwise open emergency exits ;

(*iv*) To lift out, hold, deposit on nearby seats, or manoeuvre over the seatbacks to the next row objects the size and mass of over-wing window exit doors ;

(*v*) To remove obstructions of size and mass similar to over-wing exit doors ;

(*vi*) To reach the emergency exit expeditiously ;

(*vii*) To maintain balance while removing obstructions ;

(*viii*) To exit expeditiously ;

(*ix*) To stabilise an eSCCMpe slide after deployment ; or

(*x*) To assist others in getting off an eSCCMpe slide.

(2) The person is less than 15 years of age or lacks the capacity to perform one or more of the applicable functions listed above without the assistance of an adult companion, parent, or other relative.

(3) The person lacks the ability to read and understand instructions required by this section and related to emergency evacuation provided by the AOC holder in printed or graphic form or the ability to understand oral crew commands.

(4) The person lacks sufficient visual capacity to perform one or more of the above functions without the assistance of visual aids beyond contact lenses or eyeglasses.

(5) The person lacks sufficient aural capacity to hear and understand instructions shouted by cabin crewmembers, without assistance beyond a hearing aid.

(6) The person lacks the ability to adequately impart information orally to other passengers.

(7) The person has a condition or responsibilities, such as caring for small children, that might prevent the person from performing one or more of the functions listed above; or a condition that might cause the person harm if he or she performs one or more of the functions listed above.

(*c*) Determinations as to the suitability of each person permitted to occupy an exit seat shall be made by the cabin crewmembers or other persons designated in the AOC holder's Operations Manual.

(*d*) In the event a cabin crewmember determines that a passenger assigned to an exit seat would be unable to perform the emergency exit functions, or if a passenger requests a non-exit seat, the cabin crewmember shall expeditiously relocate the passenger to a non-exit seat.

(*e*) In the event of full booking in the non-exit seats, and if necessary to accommodate a passenger being relocated from an exit seat, the cabin crewmember shall move a passenger who is willing and able to assume the evacuation functions, to an exit seat.

(*f*) Each AOC ticket agent shall, before boarding, assign seats consistent with the passenger selection criteria and the emergency exit functions, to the maximum extent feasible.

(*g*) Each AOC ticket agent shall make available for inspection by the public at all passenger loading gates and ticket counters at each aerodrome where the AOC holder conducts passenger operations, written procedures established for making determinations in regard to exit row seating.

(*h*) Each cabin crewmember shall include in his or her passenger briefings a request that a passenger identify himself or herself to allow reseating if he or she—

(1) Cannot meet the selection criteria ;

(2) Has a nondiscernible condition that will prevent him or her from performing the evacuation functions ;

(3) May suffer bodily harm as the result of performing one or more of those functions ; or

(4) Does not wish to perform emergency exit functions.

(*i*) Each cabin crewmember shall include in his or her passenger briefings a reference to the passenger information cards and the functions to be performed in an emergency exit.

(*j*) Each passenger shall comply with instructions given by a crewmember or other authorised employee of the AOC holder implementing exit seating restrictions.

(*k*) No PIC may allow taxi or pushback unless at least one required crewmember has verified that all exit rows and eSCCMpe paths are unobstructed and that no exit seat is occupied by a person the crewmember determines is likely to be unable to perform the applicable evacuation functions.

(*l*) The procedures required by this standard will not become effective until final approval is granted by the Authority. Approval will be based solely upon the safety aspects of the AOC holder's procedures. In order to comply with this standard AOC holders shall—

(1) Establish procedures that address the requirements of this standard ; and

(2) Submit their procedures for preliminary review and approval to the Authority

8.9.2.12. Prohibition Against Carriage of Weapons.

(*a*) No person may, while on board an aircraft being operated in commercial air transport, carry on or about their person a deadly or dangerous weapon, either concealed or unconcealed. An AOC holder may permit a person to transport a weapon, in accordance with the AOC holder's approved security programme,

(1) If the weapon is unloaded ; and

(2) Both the weapon and ammunition are securely stowed in a place inaccessible to any person during the flight.

(*b*) Officials or employees of the State, or crewmembers who are authorised to carry weapons on board the aircraft in domestic flights, shall do so in accordance with the AOC holders approved security programme. The PIC shall be notified by the AOC as to the number of armed persons and the location of their seats.

(*c*) The persons identified in item (b) above may not carry weapons aboard an international flight unless there is prior agreement between NIGERIA and all States in which the operation will be either conducted or overflown.

8.9.2.13. Oxygen for Medical use by Passengers.

(*a*) An AOC holder may allow a passenger to carry and operate equipment for the storage, generation or dispensing of medical oxygen only as prescribed by the Authority.

(*b*) No person may smoke, and no crewmember may allow any person to smoke within 3 m (10 ft) of oxygen storage and dispensing equipment carried for the medical use of a passenger.

(*c*) No crewmember may allow any person to connect or disconnect oxygen dispensing equipment to or from an oxygen cylinder while any other passenger is aboard the aircraft.

8.9.2.14. Carry-on Baggage.

(*a*) No person may allow the boarding of carry-on baggage unless it can be adequately and securely stowed in accordance with the AOC holder's approved Operations Manual procedures.

(*b*) No person may allow aircraft passenger entry doors to be closed in preparation for taxi or pushback unless at least one required crewmember has verified that each article of baggage has been properly stowed in overhead racks with approved restraining devices or doors, or in approved locations.

(*c*) No person may allow carry-on baggage to be stowed in a location that would cause that location to be loaded beyond its maximum placard mass limitation.

8.9.2.15. Carriage of Cargo in Passenger Compartments.

(*a*) No person may allow the carriage of cargo in the passenger compartment of an aircraft except as prescribed by the Authority below.

(*b*) Cargo may be carried anywhere in the passenger compartment if it is carried in an approved cargo bin that meets the following requirements—

(1) The bin must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aeroplane in which the bin is installed, multiplied by a factor of 1.15, using the combined mass of the bin and the maximum mass of cargo that may be carried in the bin.

(2) The maximum mass of cargo that the bin is approved to carry and any instructions necessary to insure proper mass distribution within the bin must be conspicuously marked on the bin.

(3) The bin may not impose any load on the floor or other structure of the aeroplane that exceeds the load limitations of that structure.

(4) The bin must be attached to the seat tracks or to the floor structure of the aeroplane, and its attachment must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aeroplane in which the bin is installed, multiplied by either the factor 1.15 or the seat attachment factor specified for the aeroplane, whichever is greater, using the combined mass of the bin and the maximum mass of cargo that may be carried in the bin.

(5) The bin may not be installed in a position that restricts access to or use of any required emergency exit, or of the aisle in the passenger compartment.

(6) The bin must be fully enclosed and made of material that is at least flame resistant.

(7) Suitable safeguards must be provided within the bin to prevent the cargo from shifting under emergency landing conditions.

(8) The bin may not be installed in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passenger is provided.

(*c*) Cargo, including carry-on baggage, must not be stowed in toilets.

(*d*) Cargo, including carry-on baggage must not be stowed against bulkheads or dividers in passenger compartments that are incapable of restraining articles against movement forwards, sideways or upwards and unless the bulkheads or dividers carry a placard specifying the greatest mass that may be placed there, provided that :

(1) It is properly secured by a safety belt or other tie-down having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions.

(2) It is packaged or covered to avoid possible injury to occupants.

(3) It does not impose any load on seats or in the floor structure that exceeds the load limitation for those components.

(4) It is not located in a position that obstructs the access to, or use of, any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment, or is located in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign or placard, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passengers is provided.

(*e*) Cargo, including carry-on baggage, may be carried anywhere in the passenger compartment of a small aircraft if it is carried in an approved cargo rack, bin, or compartment installed in or on the aircraft, if it is secured by an approved means, or if it is carried in accordance with each of the following—

(1) For cargo, it is properly secured by a safety belt or other tie-down having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions, or for carry-on baggage, it is restrained so as to prevent its movement during air turbulence.

(2) It is packaged or covered to avoid possible injury to occupants.

(3) It does not impose any load on seats or in the floor structure that exceeds the load limitation for those components.

(4) It is not located in a position that obstructs the access to, or use of, any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment, or is located in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign or placard, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passengers is provided.

(5) It is not carried directly above seated occupants.

(6) It is stowed in compliance with these restrictions during takeoff and landing.

(7) For cargo-only operations, if the cargo is loaded so that at least one emergency or regular exit is available to provide all occupants of the aircraft a means of unobstructed exit from the aeroplane if an emergency occurs.

8.9.2.16. Passenger Information Signs.

(*a*) The PIC shall turn on required passenger information signs during any movement on the surface, for each takeoff and each landing, and when otherwise considered to be necessary.

8.9.2.17. Required Passenger Briefings

(*a*) No person may commence a takeoff unless the passengers are briefed before takeoff in accordance with the AOC holder's Operations Manual procedures on—

(1) Smoking limitations and prohibitions ;

(2) Emergency exit location and use ;

(3) Use of safety belts ;

(4) Emergency floatation means location and use ;

(5) Fire extinguisher location and operation ;

(6) Placement of seat backs ;

(7) If flight is above 3050 m (10000 ft) MSL, the normal and emergency use of oxygen ; and

(8) The passenger briefing card.

(9) Use of other specialised equipment as required by the Authority.

(*b*) Immediately before or immediately after turning the seat belt sign off, the PIC or co-pilot shall ensure that the passengers are briefed to keep their seat belts fastened while seated, even when the seat belt sign is off.

(*c*) Before each takeoff, the PIC or co-pilot shall ensure that any persons of reduced mobility are personally briefed on-

(1) The route to the most appropriate exit ; and

(2) The time to begin moving to the exit in event of an emergency.

8.9.2.18. Passenger Briefing-Extended Overwater Operations.

(*a*) No person may commence extended overwater operations unless all passengers have been orally briefed on the location and operations of life preservers, liferafts and other flotation means, including a demonstration of the method of donning and inflating a life preserver.

8.9.2.19. Passenger Seat Belts.

(*a*) Each passenger occupying a seat or berth shall fasten his or her safety belt and keep it fastened while the "Fasten Seat Belt" sign is lighted or, in aircraft not equipped with such a sign, whenever instructed by the PIC.

(*b*) No passenger safety belt may be used by more than one occupant during takeoff and landing.

(*c*) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crewmembers in the performance of their duties or with the rapid egress of occupants in an emergency.

Note 1 : A person who has not reached his or her second birthday may be held by an adult who is occupying a seat or berth.

Note 2 : A berth, such as a multiple lounge or divan seat, may be occupied by two persons provided it is equipped with an approved safety belt for each person and is used during en route flight only.

8.9.2.20. Passenger Seat Backs

(*a*) No PIC or co-pilot may allow the takeoff or landing of an aircraft unless each passenger seat back is in the upright position.

8.9.2.21. Stowage of Food, Beverage and Passenger Service.

(*d*) No PIC, co-pilot or SCCM may allow the movement of an aircraft on the surface, or the takeoff or landing of an aircraft—

(1) When any food, beverage or tableware furnished by the AOC holder is located at any passenger seat ; and

(2) Unless each food and beverage tray and seat back tray table is in the stowed position.

8.9.2.22. Securing of Items of Mass in Passenger Compartment.

(*a*) No person may allow the takeoff or landing of an aircraft unless each item of mass in the passenger cabin is properly secured to prevent it from becoming a hazard during taxi, takeoff and landing and during turbulent weather conditions.

(*b*) No person may allow an aircraft to move on the surface, takeoff or land unless each passenger serving cart is secured in its stowed position.

8.10. CREWMEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS: COMMERCIAL AIR TRANSPORT

8.10.1.1. Limitation of Privileges of Pilots who have Attained Their 60th Birthday and Curtailment of Privileges of Pilots who have Attained Their 65th Birthday.

(*a*) No person may serve nor may any AOC holder use a person as a required PIC in single pilot operations on aircraft engaged in commercial air transport operations if that person has reached his or her 60th birthday.

(*b*) For aircraft engaged in commercial air transport operations requiring more than one pilot as flight crewmembers, the AOC holder may use one pilot up to age 65 provided that the other pilot is less than age 60.

(*c*) For aircraft engaged in long-range commercial air transport operations requiring more than one pilot as flight crewmembers, the AOC holder may use one pilot up to age 65 provided that the other pilot is less than age 60.

(*d*) Check airmen who have reached their 65th birthday or who do not hold an appropriate medical certificate may continue their check airman functions, but may not serve as or occupy the position of a required pilot flight crewmember on an aeroplane engaged in international commercial air transport operations unless the other pilot is less than age 60.

8.10.1.2. Use of Flight Simulation Training Devices.

(*a*) Each flight simulation training device that is used for flight crewmember qualification shall—

(1) Be specifically approved by the Authority for—

(*i*) The AOC holder ;

(*ii*) The type aircraft, including type variations, for which the training or check is being conducted ; and (*iii*) The particular manoeuvre, procedure, or crewmember function involved.

(2) Maintain the performance, functional, and other characteristics that are required for approval.

(3) Be modified to conform with any modification to the aeroplane being simulated that results in changes to performance, functional, or other characteristics required for approval.

(4) Be given a daily functional pre-flight check before use.

(5) Have a daily discrepancy log completed by the appropriate instructor or check airman at the end of each training or check flight.

(*b*) The simulation device shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter, heading reference) as those of the aircraft used by the operator.

(1) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.

(2) Operators that have standard instruments shall use simulators that have standard instruments.

8.10.1.3. Approval of a Flight Simulation Training Device for Credit in Training and Checking.

(*a*) No AOC holder may use a flight simulation training device for training or checking unless that simulator has been specifically approved for the AOC holder in writing by the Authority.

(*b*) No AOC holder may use a simulator for credit in training, recency and checking other than that specified in the Authority's approval.

8.10.1.4. Licence Requirements For PIC

(*a*) No pilot may act as PIC of a of an aircraft, certificated for operation with more than one pilot, in commercial air transportation operations unless he or she holds an Airline Transport Pilot Licence with applicable category, class and type rating for that aircraft.

(*b*) No pilot may act as PIC of an aircraft, certificated for operation for one pilot, in commercial air transportation operations unless he or she holds a Commercial Pilot Licence or an Airline Transport Pilot Licence with applicable category, class and type rating for that aircraft.

(*c*) If instrument privileges are to be exercised, the PIC shall hold an Instrument Rating.

8.10.1.5. Licence Requirements for Co-pilot and Cruise Relief Pilot

(*a*) No pilot may act as co-pilot of an aircraft in commercial air transport operations unless he or she holds either a Commercial Pilot Licence/ Instrument Rating or an Airline Transport Pilot Licence, each with category, class and type ratings, as applicable, for the aircraft operated.

(*b*) No pilot may act as a cruise relief pilot in commercial air transport operations unless he or she holds an Airline Transport Pilot Licence with category, and if applicable, class and type ratings, and has completed all training to serve as PIC with the exception of initial operating experience.

8.10.1.6. Flight Engineer Licence Requirements.

(*a*) No person may act as the flight engineer of an aircraft unless he or she holds a flight engineer licence with the appropriate class rating.

8.10.1.7. One Pilot Qualified to Perform Flight Engineer Functions.

(*a*) The AOC holder shall ensure that, on all flights requiring a flight engineer, there is assigned at least one other flight crewmember qualified to perform the flight engineer duties in the event the flight engineer becomes incapacitated.

8.10.1.8. Persons Qualified to Flight Release.

(*a*) No person may act as a flight dispatcher in releasing a scheduled passenger-carrying commercial air transport operation unless that person—

(1) Holds a flight dispatcher license or an Airline Transport Pilot License ; and

(2) Is currently qualified with the AOC holder for the operation and type of aircraft used.

8.10.1.9. Company Procedures Indoctrination

(*a*) No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer/flight dispatcher unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of the applicable regulations and Operations Manual procedures pertinent to the crewmember or flight operation officer's duties and responsibilities.

(*b*) The AOC holder shall provide a minimum of 40 programmed hours of instruction for company procedures indoctrination training unless a reduction is determined appropriate by the Authority.

(*c*) The knowledge area topics to be covered are contained in IS : 8.10.1.9.

8.10.1.10. Initial Dangerous Goods Training

(*a*) No person may serve nor may any AOC holder use operational personnel unless he or she has completed the appropriate initial dangerous goods curriculum approved by the Authority.

(*b*) Specific course curriculum requirements are contained in IS : 8.10.1.10.

8.10.1.11. Initial Security Training

(*a*) No person may serve nor may any AOC holder use operational personnel unless they have completed the initial security curriculum approved by the Authority.

8.10.1.12. Initial Crew Resource Management.

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer or crewmember unless that person has completed the initial CRM curriculum approved by the Authority.

(*b*) Course curriculum topics are contained in IS : 8.10.1.12.

8.10.1.13. Initial Emergency Equipment Drills.

(*a*) No person may serve nor may any AOC holder use a person as a crewmember unless that person has completed the appropriate initial emergency equipment curriculum and drills for the crewmember position approved by the Authority for the emergency equipment available on the aircraft to be operated.

(*b*) Course curriculum requirements are contained in IS : 8.10.1.13.

8.10.1.14. Initial Aircraft Ground Training

(*a*) No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer unless he or she has completed the initial ground training approved by the Authority for the aircraft type.

(*b*) Initial aircraft ground training for flight crewmembers shall include the pertinent portions of the Operations Manual relating to aircraft-specific performance, mass and balance, operational policies, systems, limitations, normal, abnormal and emergency procedures on the aircraft type to be used. Specific course curriculum requirements for flight crewmembers are contained in IS : 8.10.1.14(*b*).

(*c*) For cabin crewmembers, initial aircraft ground training shall include the pertinent portions of the Operations Manual relating to aircraft-specific configuration, equipment, normal and emergency procedures for the aircraft types within the fleet. Specific course curriculum requirements for cabin crewmembers are contained in IS : 8.10.1.14 (*c*).

(*d*) For flight operations officers, aircraft initial ground training shall include the pertinent portions of the Operations Manual relating to aircraft-specific flight preparation procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet. Specific course curriculum requirements for flight operations officers are contained in IS : 8.10.1.14(*d*).

8.10.1.15. Initial Aircraft Flight Training

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember unless he or she has completed the initial flight training approved by the Authority for the aircraft type.

(*b*) Initial flight training shall focus on the manoeuvring and safe operation of the aircraft in accordance with AOC holder's normal, abnormal and emergency procedures.

(*c*) An AOC holder may have separate initial flight training curricula, which recognise the experience levels of flight crewmembers, approved by the Authority.

(*d*) Specific flight training curriculum requirements are contained in IS : 8.10.1.15(*a*)(*d*) for pilots, IS : 8.10.1.15(*b*)(*d*) for flight engineers and IS : 8.10.1.15(*c*) for navigators.

8.10.1.16. Initial Specialised Operations Training.

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember unless he or she has completed the appropriate initial specialised operations training curriculum approved by the Authority.

(*b*) Specialised operations for which initial training curricula shall be developed include—

(1) Low minimums operations, including low visibility takeoffs and Category II and III operations ;

(2) Extended range operations ;

(3) Specialised navigation ;

(4) PIC right seat qualification ;

(5) RVSM ; and

(6) RNP.

(*c*) Specific initial specialised operations training curriculum requirements are contained in IS : 8.10.1.16.

8.10.1.17. Aircraft Differences

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer or crewmember on an aircraft of a type for which a differences curriculum is included in the AOC holder's approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

(*b*) A general listing of subjects to be covered in aircraft differences training is contained in IS : 8.10.1.17.

8.10.1.18. Reserved.

8.10.1.19. Introduction of new Equipment or Procedures.

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember when that service would require expertise in the use of new equipment or procedures for which a curriculum is included in the AOC holder's approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

8.10.1.20. Pilot Proficiency- Aircraft and Instrument Proficiency Checks.

(*a*) No person may serve nor may any AOC holder use a person as a pilot flight crewmember unless, since the beginning of the 6th calendar month before that service, that person has passed the proficiency check prescribed by Authority in the make, and model aircraft on which their services are required.

(*b*) No person may serve nor may any AOC holder use a person as a pilot in IFR operations unless, since the beginning of the 12th calendar month before that service, that pilot has passed the instrument proficiency check prescribed by the Authority.

(*c*) A pilot may complete the requirements of paragraphs (a) and (b) simultaneously in a specific aircraft type.

(*d*) When a pilot-in-command, a co-pilot or a cruise relief pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements of 8.4.1.14 for each variant or each type of aeroplane can be combined.

(*e*) The manoeuvres for aircraft pilot proficiency and instrument proficiency checks conducted under Part 8 are contained in IS 8.10.1.20 and in Part 2 under the appropriate skill test.

8.10.1.21. Re-establishing Recency Of Experience-flightcrew

(*a*) Pilots :

(1) In addition to meeting all applicable training and checking requirements, a required pilot flight crewmember who, in the preceding 90 days has not made at least three takeoffs and landings in the aircraft in which that person is to serve, shall, under the supervision of a check airman, re-establish recency of experience as follows :

(*i*) Make at least three takeoffs and landings in the aircraft in which that person is to serve or in a qualified simulator.

(*ii*) Make at least one takeoff with a simulated failure of the most critical powerplant, one landing from the minimum ILS authorised for the AOC holder, and one landing to a full stop.

(2) When using a simulator to accomplish any of the takeoff and landing training requirements necessary to re-establish recency of experience, each required flight crewmember position shall be occupied by an appropriately qualified person and the simulator shall be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.

(3) A check airman who observes the takeoffs and landings of a pilot flight crewmember shall certify that the person being observed is proficient and qualified to perform flight duty in operations and may require any additional manoeuvres that are determined necessary to make this certifying statement.

(*b*) Flight Engineer: A flight engineer who in the preceding 6 months has not flown 50 hours flight time with an AOC holder as flight engineer in the appropriate class of aeroplane shall re-establish recency by taking the proficiency check specified in Subsection 8.10.1.23.

(*c*) When a pilot-in-command, a co-pilot or a cruise relief pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements of 8.4.1.14 for each variant or each type of aeroplane can be combined.

8.10.1.22. Pairing Of Low Experience Pilots

(*a*) If a CP has fewer than 100 hours of flight time in the type aircraft being flown in commercial air transport, and the PIC is not an appropriately qualified check pilot, the PIC shall make all takeoffs and landings in situations designated as critical by the Authority in IS : 8.10.1.22.

(*b*) No PIC or CP may conduct operations for a type aircraft in commercial air transport unless either pilot has at least 75 hours of line operating flight time, either as PIC or CP.

(*c*) The Authority may, upon application by the AOC holder, authorise an exemption for the reduction of the number of hours from paragraph (b) by an appropriate amendment to the operations specifications in any of the circumstances identified in IS : 8.10.1.22.

8.10.1.23. Flight Engineer and Flight Navigatorproficiency Checks.

(*a*) No person may serve nor may any AOC holder use a person as a flight engineer or a flight navigator on an aeroplane unless within the preceding 12 calendar-months he or she has a proficiency check in accordance with the requirements prescribed by the Authority for the skill test in Part 2.

8.10.1.24. Competency Checks-cabin Crewmembers.

(*a*) No person may serve nor may any AOC holder use a person as a cabin crewmember unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check prescribed by the Authority in IS : 8.10.1.24 performing the emergency and other duties appropriate to that person's assignment.

8.10.1.25. Competency Checks-flight Dispatcher.

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check, prescribed by the Authority in IS: 8.10.1.25, performing the flight preparation and subsequent duties appropriate to that person's assignment.

8.10.1.26. Supervised Line Flying-pilots.

(*a*) Each pilot initially qualifying as PIC shall complete a minimum of 10 flights performing the duties of a PIC under the supervision of a check pilot.

(*b*) Each PIC transitioning to a new aircraft type shall complete a minimum of 5 flights performing the duties of a PIC under the supervision of a check pilot.

(*c*) Each pilot qualifying for duties other than PIC shall complete a minimum of 5 flights performing those duties under the supervision of a check pilot.

(*d*) During the time that a qualifying PIC is acquiring operating experience, a check pilot who is also serving as the PIC shall occupy a pilot station.

(*e*) In the case of a transitioning PIC, the check pilot serving as PIC may occupy the observer's seat if the transitioning pilot has made at least two takeoffs and landings in the type aircraft used, and has satisfactorily demonstrated to the check pilot that he or she is qualified to perform the duties of a PIC for that type of aircraft.

8.10.1.27. Supervised Line Flying-Flight Engineers.

(*a*) Each person qualifying as a flight engineer for each aircraft class-piston-engined ; turbopropeller powered, or turbojet powered-shall perform those functions for a minimum of 5 flights under the supervision of a check flight engineer approved by the Authority

8.10.1.28. Supervised Line Experience-Cabin Crewmembers.

(*a*) Each person qualifying as a cabin crewmember shall perform those functions on the following aircraft under the supervision of a check cabin crew member before qualifying as a required crewmember :

(1) Piston-engined or turbo-propeller powered aircraft-for a minimum of 2 flights that must include at least 5hours flown.

(2) Turbojet powered aircraft-for a minimum of 2 flights.

8.10.1.29. Line Observations-Flight Dispatchers.

(*a*) No person may serve nor may any AOC holder use a person as a flight dispatcher unless, since the beginning of the 12th calendar month before that service, that person has observed, on the flight deck, the conduct of two complete flights, comprising at least 5total hours, over routes representative of those for which that person is assigned duties.

8.10.1.30. Line (Route and Area) Checks-Pilot Qualification.

Note : The terms "*line check*" and "*route and area check*" are synonymous.

(*a*) No person may serve nor may any AOC holder use a person as a pilot unless, within the preceding 12 calendar-months, that person has passed a linecheck in which he or she satisfactorily performed his or her assigned duties in one of the types of aircraft he or she is to fly.

(*b*) No person may perform PIC duties over a designated special operational area that requires a special navigation system or procedures or in EDTO operations unless his or her competency with the system and procedures has been demonstrated to the AOC holder within the past 12 calendar-months.

(*c*) Each PIC shall demonstrate operational competency by navigation over the route and area to be flown and the aerodromes to be used as PIC under the supervision of a check pilot and, on a continuing basis, by flights performing PIC duties. This, at a minimum, shall include a PIC demonstration of knowledge in the following :

(1) The terrain and minimum safe altitudes.

(2) The seasonal meteorological conditions.

(3) The search and rescue procedures.

(4) The navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place.

(5) Procedures applicable to—

(*i*) Flight paths over heavily populated areas or high air traffic density ;

(*ii*) Obstructions ;

(*iii*) Physical layout ;

(*iv*) Lighting, approach aids ;

(*v*) Arrival, departure, holding and instrument approach procedures ; and

(*vi*) Applicable operating minima.

(*d*) Notices to airmen.

8.10.1.31. PIC Low Minimums Authorisation.

(*a*) Until a PIC has 15 flights performing PIC duties in the aircraft type (which included 5 approaches to landing using Category I or II procedures), he or she may not plan for or initiate an instrument approach when the DH or MDA is less than 100 m (300 ft) and the visibility less than 1.5km (1 statute mile).

(*b*) Until a PIC has 20 flights performing PIC duties in the aircraft type (which included 5 approach and landing using Category III procedures), he or she may not plan for or initiate an approach when the DH or MDA is less than 30 m (100 ft) or the visibility is less than 350 m RVR (1200 ft).

8.10.1.32. Designated Special Aerodromes and Heliports-PIC Qualification.

(*a*) The Authority may determine that certain airports, due to items such as surrounding terrain, obstructions, or complex approach or departure procedures, are special aerodromes requiring special aerodrome qualifications and that certain areas or routes, or both, require a special type of navigation qualifications.

(*b*) No person may serve nor may any AOC holder use a person as PIC for operations at designated special aerodromes and heliports unless within the preceding 12 calendar-months—

(*c*) The PIC has been qualified by the AOC holder through a pictorial means acceptable to the Authority for that aerodrome ; or

(1) The PIC or the assigned CP has made a takeoff and landing at that aerodrome while serving as a flight crewmember for the AOC holder.

(2) If the 12 months qualification period required in item (*b*) has expired, the PIC must re-qualify in accordance with the requirements in item (*b*).

(*d*) Designated special aerodrome and heliport limitations are not applicable if the operation will occur—

(1) During daylight hours ;

(2) When the visibility is at least 5 km (3 miles) ; and

(3) When the ceiling at that aerodrome is at least 300 m (1000 ft) above the lowest initial approach altitude prescribed for an instrument approach procedure.

8.10.1.33. Recurrent Training-Flight Crewmembers.

(*a*) No person may serve nor may any AOC holder use a person as a flight crewmember unless within the preceding 12 calendar-months that person has completed the recurrent ground and flight training curricula approved by with the Authority.

(*b*) The recurrent ground training shall include training on—

(1) Aircraft systems and limitations and normal, abnormal and emergency procedures ;

(2) Emergency equipment and drills ;

(3) Crew resource management ;

(4) Recognition or transportation of dangerous goods ; and

(5) Security training.

(*c*) The recurrent flight training curriculum shall include—

(1) Manoeuvring and safe operation of the aircraft in accordance with AOC holder's normal, abnormal and emergency procedures ;

(2) Manoeuvres and procedures necessary for avoidance of in-flight hazards ; and

(3) For authorised pilots, at least one low visibility takeoff to the lowest applicable minimum LVTO and two approaches to the lowest approved minimums for the AOC holder, one of which is to be a missed approach.

(*e*) Satisfactory completion of a proficiency check with the AOC holder for the type aircraft and operation to be conducted may be used in lieu of recurrent flight training.

(*f*) Detailed recurrent training requirements for pilots, flight engineers and flight navigators are contained in IS: 8.10.1.33.

8.10.1.34. Recurrent Training and Re-Establishment of Qualifications-Cabin Crewmembers.

(*a*) No person may serve nor may any AOC holder use a person as a cabin crewmember unless within the preceding 12 calendar-months that person has completed the recurrent ground curricula approved by the Authority relevant to the type(s) and/or variant(s) of aircraft and operations to which he or she is assigned.

(*b*) The recurrent ground training shall include training on—

(1) Aircraft-specific configuration, equipment and procedures ;

(2) Emergency and first aid equipment and drills ;

(3) Crew resource management ;

(4) Recognition or transportation of dangerous goods ; and

(5) Security training.

(*c*) Specific normal and emergency programme training requirements for cabin crewmembers are contained in IS : 8.10.1.34.

(*d*) A required cabin crewmember who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (*a*) through (*c*) shall complete :

(1) If the period of inactivity is up to but not exceeding 24 months, the recurrent ground curricula.

(2) If the period of inactivity is more than 24 months but not exceeding 60 months, the refresher ground curricula contained in IS : 8.10.1.34(*b*)-IS to be provided by DOT.

(3) If period of inactivity is more than 60 months, the initial AOC training programme and competency check specified in Subsection 8.10.1.24.

8.10.1.35. Recurrent Training and Re-Establishment of Qualifications-Flight Operations Officers.

(*a*) No person may serve nor may any AOC holder use a person as a flight operations officer unless within the preceding 12 calendar-months that person has completed the recurrent ground curricula approved by the Authority relevant to the type(s) and/or variant(s) of aircraft and positions to which he or she is assigned.

(*b*) Specific requirements for flight operations officers recurrent training are contained in IS : 8.10.1.35.

(*c*) A required flight operations officer who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (*a*) through (*b*) shall complete :

(1) If the period of inactivity is up to but not exceeding 24 months, the recurrent ground curricula.

(2) If period of inactivity is more than 24 months, the initial AOC training programme and competency check specified in Sub section 8.10.1.25.

8.10.1.36. Instructor Qualifications-Flight Crew, Cabin Crew, Flight Dispatchers.

(*a*) Flight Crew. No AOC holder may use a person nor may any person serve as a flight instructor in an established flight training programme unless, with respect to the aircraft type involved, that person—

(1) Holds the personnel licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable ;

(2) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(3) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check ; and

(5) Holds the appropriate medical certificate for service as a required crewmember.

(*b*) Flight Instructor - Flight Simulation Training. No person may serve nor may any AOC holder use a person as a Flight Instructor in a flight simulation training device, unless, since the beginning of the 12th calendar month before that service, that person has—

(1) Flown at least 5 flights as a required crewmember for the type of aircraft involved ; or

(2) Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

(*c*) Cabin Crew. No AOC holder may use a person nor may any person serve as an instructor in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person—

(1) Holds the qualification required to serve as a cabin crewmember ;

(2) Has satisfactorily completed the appropriate training phases for the aircraft and position involved, including recurrent training and differences training, that are required to serve as a cabin crewmember ;

(3) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to service as a cabin crewmember ;

(4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.

(*d*) Flight Dispatcher. No AOC holder may use a person nor may any person serve as an instructor in an established flight operations officer training programme unless, with respect to the aircraft type and position involved, that person—

(1) Holds the licence required to serve as a flight operations officer ;

(2) Has satisfactorily completed the appropriate training phases for the aircraft or position involved, including recurrent training and differences training, that are required to serve as a flight operations officer ;

(3) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a flight operations officer ; and

(4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.

8.10.1.37. Instructor Training

(*a*) No person may serve nor may any AOC holder use a person as an instructor for flight crew, cabin crew or flight dispatcher, unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

(*b*) Specific training programme requirements for flight crew instructors are contained in IS : 8.10.1.37.

8.10.1.38. Personnel Approved to Conduct Checks.

(*a*) The Authority may approve the following AOC holder personnel to conduct checks when such personnel meet the requirements for the authorised responsibilities, and may be approved for either aircraft or simulator, or both, as applicable, for checking of flight crew—

(1) Check pilot ;

(2) Check flight engineer ;

(3) Check cabin crewmember ; and.

(4) Check flight dispatcher.

(*b*) The authorized duties of check personnel are to—

(1) Conduct initial and recurrent proficiency checks for flight crew and competency checks for cabin crew and flight operations officers,

(2) Certify as satisfactory, the knowledge and proficiency of the flight crew, and the knowledge and competency of the cabin crew and flight operations officers ; and

(3) For all check personnel, supervise operating experience (OE).

(*c*) No person may serve nor may any AOC holder use a person as a check personnel under the AOC holder's crewmember checking and standardisation programme in Nig. CAR Part 9unless that person has :

(1) been identified by name and function and approved in writing by the Authority ; and

(2) successfully completed the AOC holders curricula approved by the Authority for those functions for which he or she is to serve.

(*d*) Once approved, no person may serve nor may any AOC holder use a person as a check personnel for any flight crew, cabin crew or flight operations officer checks unless that person has demonstrated, initially and at least biennially to an Authority inspector, the ability to conduct a check for which he or she is approved.

8.10.1.39. Check Personnel Qualifications

(*a*) Check personnel for flight crew.

(1) No AOC holder may use a person, nor may any person serve as a check personnel in an established flight crew training programme unless, with respect to the aircraft type involved, that person—

(*i*) Holds the personnel licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable ;

(*ii*) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(*iii*) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable ;

(*iv*) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check for check personnel duties ;

(*v*) Holds the appropriate medical certificate if serving as a required flight crewmember ; and

(*vi*) Has been approved by the Authority for the check airman duties involved.

(2) Check Personnel- Simulator. Additional requirements. No person may serve nor may any AOC holder use a person as a check personnel in a flight simulation training device, unless, since the beginning of the 12th calendar month before that service, that person has—

(3) Flown at least 5 flights as a required crewmember for the type of aircraft involved ; or

(4) Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

(*b*) Check Personnel for Cabin Crew.

(1) No AOC holder may use a person, nor may any person serve as a check cabin crewmember in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person—

(*i*) Holds the qualifications required to serve as a cabin crewmember ;

(*ii*) Has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a cabin crewmember ;

(*iii*) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a cabin crewmember ;

(*iv*) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check personnel duties ; and

(*v*) Has been approved by the Authority for the check cabin crewmember duties involved.

(*c*) Check Personnel for Flight Dispatcher.

(1) No AOC holder may use a person, nor may any person serve as a check flight dispatcher in an established flight dispatcher training programme unless, with respect to the aircraft type or position involved, that person—

(*i*) Holds the licence required to serve as a flight dispatcher ;

(*ii*) Has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a flight operations officer ;

(*iii*) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a flight operations officer ;

(*iv*) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check flight dispatcher duties involved.

(*v*) Has been approved by the Authority for the check flight dispatcher duties involved.

8.10.1.40. Check Personnel Training.

(*a*) No person may serve nor may any AOC holder use a person for checks unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

(*b*) Specific training programme requirements for check personnel are contained in IS : 8.10.1.40.

8.10.1.41. Single-Pilot Operations Under IFR or at Night-Qualifications, Training, Checking.

(*a*) No person may conduct single-pilot-operations under IFR or at night in commercial air transportation, in accordance with Subpart 8.8.1.30, unless the operation is approved by the Authority and the pilot has at least 50 hours flight time in the aircraft class in which he or she is to serve and of those 50 hours, not less than 10 hours shall be as pilot in command.

(*b*) For single-pilot-operations conducted under IFR :

(1) The pilot shall have at least 25 hours flight time under IFR in the type and class of aircraft in which he or she is to serve.

(2) The 25 hours flight time under IFR referenced in b. (1) may form part of the required 50 hours flight time in aircraft class.

(3) The pilot shall have performed in single-pilot-operations, at least 5 IFR flights including 3 instrument approaches in the class of aircraft in which he or she is to serve within 90 days preceding the flight, or

(4) Within 90 days preceding the flight, the pilot has satisfactorily completed the single-pilot-operation instrument competency check, as prescribed by the Authority, in the class of aircraft in which he or she is to serve.

(*c*) For single-pilot-operations conducted at night :

(1) The pilot shall have performed in single-pilot-operations at least 3 take offs and landings at night in the type and class of aircraft in which he or she is to serve within 90 days preceding the flight, and

(2) Have successfully completed the approved single-pilot-operation training programme prescribed by the Authority.

(*d*) No pilot may serve nor may any AOC holder assign a person to operate an aircraft in single-pilot-operations in commercial air transport unless the pilot has :

(1) Successfully completed the relevant training requirements of Subpart 8.10 applicable to flight crewmembers engaged in commercial air transport ;

(2) Successfully completed the approved single-pilot operations training programme prescribed by the Authority, and

(3) Satisfactorily completed the single-pilot operations checking requirements, as prescribed by the Authority, in the type and class of aircraft in which he or she is to serve.

Note : In addition to successfully completing the relevant training requirements of Subpart 8.10 applicable to flight crewmembers engaged in commercial air transport, additional training for pilots conducting single-pilot-operations at night shall include passenger briefings with respect to emergency evacuation, autopilot management and the use of simplified in-flight documentation.

8.10.1.42. Reserved

8.10.1.43. Monitoring of Training and Checking Activities.

(*a*) To enable adequate supervision of its training and checking activities, the AOC holder shall forward to the Authority at least 72 hours before the scheduled activity the dates, report times and report location of all—

(1) Training for which a curriculum is approved in the AOC holder's training programme ; and

(2) Proficiency, competency and line checks.

(*b*) Failure to provide the information required by paragraph (a) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

8.10.1.44. Termination of a Proficiency, Competency or Line Check.

(*a*) If it is necessary to terminate a check for any reason, the AOC holder may not use the crewmember or flight operations officer in commercial air transport operations until the completion of a satisfactory recheck.

8.10.1.45. Recording of Crewmember and Flight Operations Officer Qualifications.

(*a*) The AOC holder shall record in its records maintained for each crewmember and flight operations officer, the completion of each of the qualifications required by this Part.

(*b*) A crewmember or flight operations officermay complete the curricula required by this Part concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

8.10.1.46. Reserved

8.10.1.47. Eligibility Period.

(*a*) Crewmembers required to take a proficiency check, test or competency check, or recurrent training to maintain qualification for commercial air transport operations may complete those requirements at any time during the eligibility period.

(*b*) The eligibility period is defined as the three calendar month period including the month-prior, the month-due, and the month-after any due date specified by this sub-section.

(*c*) Completion of the requirement at any time during the period shall be considered as completed in the month-due for calculation of the next due date.

8.10.1.48. Reductions in Requirements

(*a*) The Authority may authorise reductions in, or waive, certain portions of the training requirements of this subpart, taking into account the previous experience of the crewmembers.

(*b*) Any AOC holder request for reduction or waiver shall be made in writing and outline the basis under which the request is made.

(*c*) If the request was for a specific crewmember, the correspondence from the Authority authorising the reduction and the basis for it shall be filed in the record the AOC holder maintains for that crewmember.

(*d*) If approved by the Authority, a person need not complete the programmed hours of flight training for the particular aircraft if he or she :

(1) progresses successfully through flight training,

(2) is recommended by their instructor, and

(3) successfully completes the appropriate flight check with a check person.

(*e*) If approved by the Authority, a person need not complete the programmed hours of cabin crew or flight operations officer training if he or she :

(1) progresses successfully through cabin crew or flight operations officer training,

(2) is recommended by their instructor, and

(3) successfully completes the appropriate competency check with acheck person.

(*f*)Whenever the Authority finds that 20 percent of the checks given at a particular training base during the previous 6 months are unsuccessful, this method of approval will not be used by the AOC holder at that base until the Authority finds that the effectiveness of the training programme has improved.

8.11. Fatigue Management

8.11.1.1. Applicability.

(*a*) This section is applicable to the management of fatigue-related safety risks of crewmembers and flight operations officers/flight dispatchers engaged in commercial air transport flight operations.

8.11.1.2. Managing Fatigue-Related Safety Risks.

(*a*) For the purpose of managing fatigue-related safety risks, an AOC holder shall establish either :

(1) flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management regulations in Section 8.12 ; or

(2) a Fatigue Risk Management System (FRMS) in compliance with Sub-section 8.11.1.2(*e*) ; or

(3) a FRMS in compliance withSubsection8.11.1.2(*e*) for part of its operations and the requirements of Section8.12 for the remainder of its operations.

(*b*) Where the operator adopts prescriptive fatigue management regulations for part or all of its operations, the Authority may approve, in exceptional circumstances, variations to these regulations on the basis of a risk assessment provided by the operator. Approved variations shall provide a level of safety equivalent to, or better than that achieved through the prescriptive fatigue management regulations.

(*c*) The Authority shall approve an operator's FRMS before it may take the place of any or all of the prescriptive fatigue management regulations. An approved FRMS shall provide a level of safety equivalent to, or better than, the prescriptive fatigue management regulations.

(*d*) Operators using an FRMS must adhere to the following provisions of the FRMS approval process that allows the Authority to ensure that the approved FRMS meets the requirements of Subsection 8.11.1.2(*c*).

(1) Establish maximum values for flight times and/or flight duty period(s) and duty period(s), and minimum values for rest periods that shall be based upon scientific principles and knowledge, subject to safety assurance processes

(2) Adhere to Authority mandates to decrease maximum values and increase in minimum values in the event that the operator's data indicates these values are too high to too low, respectively ; and

(3) Provide justification to the Authority for any increase in maximum values or decrease in minimum values based on accumulated FRMS experience and fatigue-related data before such changes will be approved by the Authority.

(*e*) Operators implementing an FRMS to manage fatigue-related safety risks shall, as a minimum :

(1) Incorporate scientific principles and knowledge within the FRMS ;

(2) Identify fatigue-related safety hazards and the resulting risks on an ongoing basis ;

(3) Ensure that the remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly ;

(4) Provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions ; and

(5) Provide for continuous improvement to the overall performance of the FRMS.

(*f*) An operator implementing an FRMS shall integrate the FRMS with the SMS.

8.11.1.3. Duty and Rest Periods.

(*a*) Duty and rest periods for flight crew and cabin crew are contained in IS : 8.11.1.3.

8.12. FLIGHT TIME, FLIGHT DUTY PERIODS, DUTY PERIODS, AND REST PERIODS FOR FATIGUE MANAGEMENT

8.12.1.1. Applicability.

(*a*) This section is applicable to the rest, duty and flight time limitations of crewmembers and flight operations officers/flight dispatchers engaged in commercial air transport flight operations.

8.12.1.2. Duty and Rest Periods-all Crewmembers and Flight Operations Officers.

(*a*) With respect to duty periods—

(1) Persons are considered to be on duty if they are performing any tasks on behalf of the AOC holder, whether scheduled, requested or self-initiated.

(2) If an AOC holder requires a flight crewmember to engage in dead-head transportation for more than 4 hours, one half of that time shall be treated as duty time, unless they are given 10 hours of rest on the ground before being assigned to flight duty.

(3) No AOC holder may schedule :

(*i*) A flight crew member for more than 14 hours of duty, except as prescribed by the Authority.

(*ii*) A cabin crew member for more than 14 consecutive hours of duty, except as prescribed by the Authority.

(*iii*) A flight operations officer/aircraft dispatcher for more than 10 consecutive hours of duty within a 24 consecutive hour period, unless that person is given an intervening rest period of at least 8 hours at or before the end of the 10 hours duty, except in cases where circumstances or emergency conditions beyond the control of the AOC holder require otherwise.

(*A*) Each AOC holder shall establish the daily duty period for a flight operations officer/aircraft dispatcher so that it begins at a time that allows him or her to become thoroughly familiar with existing and anticipated weather conditions along the route before he or she dispatches any aircraft.

(*B*) He or she shall remain on duty until each aircraft dispatched by him or her has completed its flight or has gone beyond his or her jurisdiction or until he or she is relieved by another qualified dispatcher.

(*b*) With respect to rest periods—

(1) The minimum rest period is considered to be 8 consecutive hours.

(2) The minimum rest period for flight crewmembers shall be 9 consecutive hours, unless otherwise prescribed by the Authority.

(3) The AOC holder may exercise the option to reduce a crewmember's rest period within the limitations prescribed under IS : 8.12.1.3.

(4) The AOC holder shall relieve the flight crewmember, flight operations officer/flight dispatcher, or cabin crewmember from all duties for 24 consecutive hours during any 7 consecutive day period.

(5) Time spent in transportation, not local in character, which is required by the AOC holder to position crewmembers to or from flights is not considered part of a rest period.

(6) Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crewmember's home station is not considered part of a rest period.

(7) No AOC holder may assign, nor may any person—

(***i***) Perform duties in commercial air transportation unless that person has had at least the minimum rest period applicable to those duties as prescribed by the Authority ; or

(*ii*) Accept an assignment to any duty with the AOC holder during any required rest period.

8.12.1.3. Duty Aloft-Flight Crew.

(*a*) The Authority will consider all time spent on an aircraft as an assigned flight crewmember or relief flight crewmember, whether resting or performing tasks, to be duty aloft.

(*c*) The Authority will consider a flight crewmember to be on continuous duty aloft unless the flight crewmember receives a rest period of 8 consecutive hours on the ground.

(*d*) Each AOC holder shall provide adequate sleeping quarters, including a berth on the aircraft whenever a flight crewmember is scheduled to be aloft for more than 12 hours during any 24 consecutive hours.

8.12.1.4. Maximum Number of Flight Time Hours-Flight Crew.

(*a*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 8 hours in any 24 consecutive hours.

(*b*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment as a required crewmember for more than 7 flights in commercial air transportation during any period of 18 consecutive hours, whichever comes first.

(*c*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 30 hours in any 7-day period.

(*d*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 100 hours in any 30-day period.

(*e*) No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time, total flights or duty aloft in commercial flying will exceed the limitations prescribed by the Authority.

(*f*)No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 1000 hours in any 12-calendar month period.

8.12.1.5. Compliance with Scheduling Requirements.

(*a*) The Authority will consider a person in compliance with prescribed standards if that person exceeds flight/duty limitations when—

(1) The flight is scheduled and normally terminates within the prescribed limitations ; but

(2) Due to circumstances beyond the control of the AOC holder (such as adverse weather conditions) are not expected at the time of departure to reach the destination within the scheduled time.

(*b*) The Authority will consider a person in compliance with prescribed duty limitations, if that person exceeds applicable limitations during emergency or adverse situations beyond the control of the AOC holder.

8.12.1.6. Special Flight Duty Schemes.

(*a*) The Authority may approve a special flight duty scheme for an AOC holder.

(*b*) An AOC holder may elect to apply the flight crewmember flight duty and rest requirements to the cabin crewmembers.

8.12.1.7. Flight Time, Duty and Rest Period Records.

(*a*) Each AOC holder shall maintain records for each crew member and flight operations officer/flight dispatcher of flight time, flight duty periods, duty periods, and rest periods for a period of 24 months.

8.13. FLIGHT RELEASE-COMMERCIAL AIR TRANSPORT.

8.13.1.1. Applicability.

(*a*) This Subpart is applicable to an AOC holder and the person designated by the AOC holder to issue a flight release.

8.13.1.2. Qualified Persons Required For Operational Control Functions

(*a*) A qualified person shall be designated by the AOC holder to exercise the functions and responsibilities for operational control of each flight in commercial air transport.

(*b*) For passenger-carrying flights conducted on a published schedule, a licensed and qualified flight operations officer shall be on-duty at an operations base to perform the operational control functions.

(*c*) For all other flights, the Director of Operations and the PIC are the qualified persons exercising operational control responsibilities, and shall be available for consultation before, during and immediately following the flight operation.

(1) The Director of Operations may delegate the functions for initiating, continuation, diversion and termination of a flight to other employees. However, the Director of Operations shall retain full responsibility for these functions.

(*d*) For all flights, the PIC shares in the responsibility for operational control of the aircraft and has the situational authority to make decisions regarding operational control issues in-flight.

(1) Where a decision of the PIC differs from that recommended, the person making the recommendation shall make a record of the associated facts.

8.13.1.3. Functions Associated with Operational Control.

(*a*) The person exercising responsibility for operational control for an AOC holder shall—

(1) Authorise the specific flight operation ;

(2) Ensure that only those operations authorised by the AOC operations specifications are conducted ;

(3) Ensure that an airworthy aircraft properly equipped for the flight is available ;

(4) Specify the conditions under which a flight may be dispatched or released (weather minimums, flight planning, aircraft loading, and fuel requirements ;

(5) Ensure that qualified personnel and adequate facilities are available to support and conduct the flight ;

(6) Ensure that crewmembers are in compliance with the flight and duty time requirements when departing on a flight ;

(7) Provide the PIC and other personnel who perform operational control functions with access to the necessary information for the safe conduct of a flight (such as weather, NOTAMS and aerodrome analysis) ;

(8) Ensure that proper flight planning and preparation is made ;

(9) Ensure that flight locating and flight following procedures are followed ;

(10) Ensure that each flight has complied with the conditions specified for release before it is allowed to depart ;

(11) Ensure that when the conditions specified for a release cannot be met, the flight is either cancelled, delayed, re-routed, or diverted, and

(12) For all flights, ensure the monitoring of the progress of the flight and the provision of information that may be necessary to safety.

Note : See also ICAO Doc 9376, Preparation of an Operations Manual, Chapters 7 and 8.

8.13.1.4. Operational Control Duties

(*a*) For all flights, the qualified person performing the duties of a flight operations officer shall—

(1) Assist the PIC in flight preparation and provide the relevant information required ;

(2) Assist the PIC in preparing the operational and ATC flight plans ;

(3) Sign the dispatch copy of the flight release ;

(4) Furnish the PIC while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight ; and

(5) In the event of an emergency situation which endangers the safety of the aeroplane or persons becomes known first to the flight operations officer/flight dispatcher, action by that persons shall be in accordance with such procedures as outlined in the AOC holder's operations manual. Where necessary, immediately notify the appropriate authorities on the nature of the situation, and if required, a request for assistance.

(*b*) A qualified person performing the operational control duties shall avoid taking any action that would conflict with the procedures established by—

(1) ATC ;

(2) The meteorological service ;

(3) The communications service ; or

(4) AOC holder.

Note : See also ICAO Doc 9376, Preparation of an Operations Manual, Chapters 7 and 8.

8.13.1.5. Contents of a Flight Release/Operational Flight Plan.

(*a*) The dispatch or flight release/operational flight plan shall contain or have attached at least the following information concerning each flight :

(1) Company or organisation name.

(2) Make, model, and registration number of the aircraft being used.

(3) Flight or trip number, and date of flight.

(4) Name of each flight crewmember, cabin crewmember, and PIC.

(5) Departure aerodrome, destination aerodromes, alternate aerodromes, and route.

(6) Minimum fuel supply (in gallons or pounds).

(7) A statement of the type of operation (e.g., IFR, VFR).

(8) The latest available weather reports and forecasts for the destination aerodrome and alternate aerodromes.

(9) Any additional available weather information that the PIC considers necessary.

(*b*) The dispatch or flight release/operational flight plan shall be signed by the PIC and, when applicable, the flight operations officer, and a copy shall be filed with operator or a designated agent. If these procedures are not possible, it shall be left with the aerodrome authority or on record at a suitable place at the point of departure.

Note : See also ICAO Doc 9376, Preparation of an Operations Manual, Chapters 7.

8.13.1.6. Flight Release-Aircraft Requirements.

(*a*) No person may issue a flight release for a commercial air transport operation unless the aircraft is airworthy and properly equipped for the intended flight operation.

(*b*) No person may issue a flight release for a commercial air transport operation using an aircraft with inoperative instruments and equipment installed, except as specified in the MEL approved for the AOC holder for that type aircraft.

(*c*) No person may issue a flight release for a commercial air transport operation using an aircraft unless a maintenance release has been issued for that aircraft.

(*d*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been met.

(*e*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.7. Flight Release-Facilities and Notams.

(*a*) No person may release an aircraft over any route or route segment unless there are adequate communications and navigational facilities in satisfactory operating condition as necessary to conduct the flight safely.

(*b*) The flight operations officer shall ensure that the PIC is provided all available current reports or information on aerodrome conditions and irregularities of navigation facilities that may affect the safety of the flight.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been complied met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

Note : For his or her review of the operational flight plan, the PIC will be provided with all available NOTAMs with respect to the routing, facilities and aerodromes.

8.13.1.8. Flight Release-Weather Reports and Forecasts.

(*a*) No person may release a flight unless he or she is thoroughly familiar with reported and forecast weather conditions on the route to be flown.

(*b*) No person may release a flight unless he or she has communicated all information and reservations they may have regarding weather reports and forecasts to the PIC.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 for operational flight planning have been complied met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.9. Flight Release-in Icing Conditions.

(*a*) No person may release an aircraft, when in their opinion or that of the PIC, the icing conditions that may be expected or are met exceed that for which the aircraft is certified and has sufficient operational de-icing or anti-icing equipment.

(*b*) No person may release an aircraft any time conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless there is available to the PIC at the aerodrome of departure adequate facilities and equipment to accomplish the procedures approved for the AOC holder by the Authority for ground de-icing and anti-icing.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been complied met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

Note : ICAO Doc 9640, Manual of Aircraft Ground De-Icing/Anti-Icing, provides additional guidance.

8.13.1.10. Flight Release-Under VFR or IFR

(*a*) No person may release a flight under VFR or IFR unless the weather reports and forecasts indicated that the flight can reasonably be expected to be completed as specified in the release.

8.13.1.11. Flight Release-Minimum Fuel Supply.

(*a*) No person may issue a flight release for a commercial air transport operation unless the fuel supply specified in the release is equivalent to or greater than the minimum flight planning requirements of this Part, including anticipated contingencies.

(*b*) No person may issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 for operational flight planning have been met.

(*c*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.12. Flight Release-aircraft Loading And Performance.

(*a*) No person may issue a flight release unless he or she is familiar with the anticipated loading of the aircraft and is reasonably certain that the proposed operation will not exceed the—

(1) Centre of gravity limits ;

(2) Aircraft operating limitations ; and

(3) Minimum performance requirements.

(*b*) No person may issue a flight release for a commercial air transport operation unless any load carried is properly distributed and safely secured.

(*c*) No person may issue a flight release for a commercial air transport operation unless the requirements of § 8.13.1.5 for operational flight planning have been met.

(*d*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.13. Flight Release-Amendment or Re-Release en Route.

(*a*) Each person who amends a flight release while the flight is en route shall record that amendment.

(*b*) No person may amend the original flight release to change the destination or alternate aerodrome while the aircraft is en route unless the flight preparation requirements for routing, aerodrome selection and minimum fuel supply are met at the time of amendment or re-release.

(*c*) No person may allow a flight to continue to an aerodrome to which it has been released if the weather reports and forecasts indicate changes that would render that aerodrome unsuitable for the original flight release.

(*d*) No person may issue a flight release for a commercial air transport operation unless the requirements of Subsection 8.13.1.5 for operational flight planning have been met.

(*e*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.13.1.14. Flight Release-with Airborne Weather Radar Equipment.

(*a*) No person may release a large aircraft carrying passengers under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment is in satisfactory operating condition.

(*b*) No person may issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 for operational flight planning have been met.

(*c*) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.14. Corporate Aviation Operations.

8.14.1.1. Applicability.

(*a*) This subpart prescribes additional requirement for corporate aviation operation involving aircraft that are operated by pilots employed for the purpose of flying the aircraft.

(*b*) The term "aircraft" - is used to indicate that a corporate aviation operation using a mix of aircrafts and helicopters is be subject to this Sub-part as long as at least one aeroplane is involved.

(*c*) An operation involving an aeroplane with a seating configuration of more than 9 passenger seats should be conducted in accordance with this Section.

(*d*)(1) aeroplanes with a maximum certificated take-off mass exceeding 5700 kg ; or

(2) aeroplanes equipped with one or more turbojet engines

8.14.1.2. General.

(*a*) Compliance With Laws, Regulations And Procedures.

(1) An operator shall ensure that all employees comply with the laws, regulations and procedures prescribed in these regulations.

(2) An operator shall ensure that all pilots are familiar with the laws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto. The operator shall ensure that other members of the flight crew are familiar with such of these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aircraft.

(3) The pilot-in-command is responsible for operational control. An operator shall describe the operational control system in the operations manual and identify the roles and responsibilities of those involved with the system.

(4) An operator shall ensure that the pilot-in-command has available on board the aircraft all the essential information concerning the search and rescue services in the area over which the aircraft will be flown.

(5) An operator shall ensure that flight crew members demonstrate the ability to speak and understand the language used for aeronautical radiotelephony communications as specified in part 2 of this regulation.

8.14.1.3. Safety Management System.

(*a*) An operator shall establish and maintain a safety management system that is appropriate to the size and complexity of the operation.

(*b*) The safety management system shall as minimum include :

(1) A process to identify actual and potential safety hazards and assess the associated risks ;

(2) A process to develop and implement remedial action necessary to maintain an acceptable level of safety ; and

(3) Provision for continuous monitoring and regular assessment of the appropriateness and effectiveness of safety management activities.

8.14.2. Flight Operations.

8.14.2.1. Operating Facilities.

An operator shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

8.14.2.2. Operational Management.

(1) Operator notification—

(*a*) If an operator has an operating base in a State other than the State of Registry, the operator shall notify the State in which the operating base is located.

(*b*) Upon notification in accordance with 8.14.2.2 (a), safety and security oversight shall be coordinated between the State in which the operating base is located and the State of Registry.

8.14.2.3. Operations Manual.

(*a*) An operator shall provide, for the use and guidance of personnel concerned, an operations manual containing all the instructions and information necessary for operations personnel to perform their duties. The operations manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual. The operations manual shall be approved by the Authority in accordance with IS : 8.14.2.3.

8.14.2.4. Operating Instructions-General.

(*a*) An operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole.

(*b*) An operator should issue operating instructions and provide information on aircraft climb performance to enable the pilot-in-command to determine the climb gradient that can be achieved during the departure phase for the existing take-off conditions and intended take-off technique. This information should be included in the operations manual.

8.14.2.5. In-Flight Simulation of Emergency Situations.

(*a*) An operator shall ensure that when passengers are being carried, no emergency or abnormal situations shall be simulated.

8.14.2.6. Checklists

(*a*) Checklists shall be used by flight crews prior to, during and after all phases of operations, and in emergencies, to ensure compliance with the operating procedures contained in the aircraft operating manual and the aircraft flight manual or other documents associated with the certificate of airworthiness and otherwise in the operations manual, are followed. The design and utilization of checklists shall observe Human Factors principles.

8.14.2.7. Minimum Flight Altitudes.

(*a*) An operator shall specify, for flights which are to be conducted in accordance with the instrument flight rules, the method of establishing terrain clearance altitudes.

8.14.2.8. Aerodrome Operating Minima.

(*a*) An operator shall ensure that no pilot-in-command operates to or from an aerodrome using operating minima lower than those prescribed by the Authority for that aerodrome in which it is located, except with the specific approval of the Authority.

8.14.2.9. Fatigue Management Programme.

(*a*) An operator shall establish and implement a fatigue management programme that ensures that all operator personnel involved in the operation and maintenance of aircraft do not carry out their duties when fatigued. The programme shall address flight and duty times and be included in the operations manual.

8.14.2.10. Passengers.

(*a*) An operator shall ensure that passengers are made familiar with the location and use of :

(1) seat belts ;

(2) emergency exits ;

(3) life jackets, if the carriage of life jackets is prescribed ;

(4) oxygen dispensing equipment, if the provision of oxygen for the use of passengers is prescribed ; and

(5) other emergency equipment provided for individual use, including passenger emergency briefing cards

(*b*) An operator shall ensure that all persons on board are aware of the location and general manner of use of the principal emergency equipment carried for collective use.

(*c*) An operator shall ensure that in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

(*d*) An operator shall ensure that during take-off and landing and whenever considered necessary, by reason of turbulence or any emergency occurring during flight, all passengers on board an aircraft are secured in their seats by means of the seat belts or harnesses provided.

8.14.2.11. Flight Preparation.

(*a*) The operator shall develop procedures to ensure that a flight is not commenced unless :

(1) The aircraft is airworthy, duly registered and that appropriate certificates with respect thereto are on board the aircraft ;

(*b*) The instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions ;

(*c*) Any necessary maintenance has been performed in accordance with Sub-part 8.14.10

(*d*) The mass of the aircraft and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected ;

(*e*) any load carried is properly distributed and safely secured ; and

(*f*) the aircraft operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.

8.14.2.12. Operational Flight Planning.

(*a*) An operator shall specify flight planning procedures to provide for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned. These procedures shall be included in the operations manual.

8.14.2.13. Alternate Aerodromes.

(*a*) Take-off alternate aerodrome

(1) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

(2) The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure :

(*i*) Aircrafts having two engines. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed ; and

(*ii*) Aircraft having three or more engines. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

(*b*) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

8.14.2.14. Refuelling with Passengers on Board.

(*a*) An aircraft shall not be refuelled when passengers are embarking, on board or disembarking unless it is properly attended by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

(*b*) When refuelling with passengers embarking, on board or disembarking, two-way communication shall be maintained by the aircraft's intercommunication system or other suitable means between the ground crew supervising the refuelling and the qualified personnel on board the aircraft.

8.14.2.15. Oxygen Supply

(*a*) A flight to be operated at flight altitudes at which the atmospheric pressure in personnel compartments will be less than 10,000 ft shall not be commenced unless sufficient stored breathing oxygen is carried to supply :

(1) All crew members and 10 per cent of the passengers for any period in excess of 30 minutes that the pressure in compartments occupied by them will be between 10,000 ft and 13,000 ft ; and

(2) The crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than 13,000 ft.

(*b*) A flight to be operated with a pressurized aircraft shall not be commenced unless a sufficient quantity of stored breathing oxygen is carried to supply all the crew members and passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurization, for any period that the atmospheric pressure in any compartment occupied by them would be less than 10,000 ft. In addition, when an aircraft is operated at flight altitudes at which the atmospheric pressure is less than 25,000 ft, or which, if operated at flight altitudes at which the atmospheric pressure is more than 25,000 ft and cannot descend safely within four minutes to a flight altitude at which the atmospheric pressure is equal to 13,000 ft, there shall be no less than a 10-minute supply for the occupants of the passenger compartment.

8.14.3. In-Flight Procedures.

8.14.3.1. Instrument Approaches.

(*a*) In the aircraft operating manual an operator shall include operating procedures for conducting instrument approaches.

8.14.3.2. Use of Oxygen.

(*a*) All flight crew members, when engaged in performing duties essential to the safe operation of an aircraft in flight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in 8.14.2.15

(*b*) All flight crew members of pressurized aircrafts operating above an altitude where the atmospheric pressure is less than 25,000 ft shall have available at the flight duty station a quick-donning type of oxygen mask which will readily supply oxygen upon demand.

8.14.3.3. Aeroplane Operating Procedures for Noise Abatement.

(*a*) Noise abatement procedures specified by an operator for any one aircraft type should be the same for all aerodromes.

8.14.3.4. Aircraft Operating Procedures for Rates of Climb and Descent.

(*a*) The pilot in command shall consider using appropriate procedures to ensure that a rate of climb or descent of less than 8 m/s or 1 500 ft/min (depending on the instrumentation available) is achieved throughout the last 300m (1000 ft) of climb or descent to the assigned altitude or flight level, when made aware of another aircraft at or approaching an adjacent altitude or flight level Unless otherwise specified in an air traffic control instruction, to avoid unnecessary airborne collision avoidance system (ACAS II) resolution advisories in aircraft at or approaching adjacent altitudes or flight levels.

8.14.3.5. Duties of Pilot-in-Command.

(*a*) The pilot-in-command shall ensure that the checklists specified in 8.14.6 are complied with in detail.

(*b*) The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aircraft, resulting in serious injury or death of any person or substantial damage to the aircraft or property. In the event that the pilot-in-command is incapacitated the operator shall take the forgoing action.

(*c*) The pilot-in-command shall be responsible for reporting all known or suspected defects in the aircraft, to the operator, at the termination of the flight.

(*d*) The pilot-in-command shall be responsible for the journey log book or the general declaration containing the following information :

(1) Aircraft nationality and registration ;

(2) Date ;

(3) Crew member names and duty assignments ;

(4) Departure and arrival points and times ;

(5) Purpose of flight ;

(6) Observations regarding the flight ; and

(7) Signature of the pilot-in-command.

8.14.5. Cabin Baggage (Take-off and Landing)

(*a*) An operator shall specify procedures to ensure that all baggage carried onto an aircraft and taken into the passenger cabin is adequately and securely stowed.

8.14.6. Aircraft Performance Operating Limitations.

(*a*) An aircraft shall be operated in compliance with the terms of its certificate of airworthiness and within the approved operating limitations contained in its flight manual.

(*b*) The State of Registry shall take such precautions as are reasonably possible to ensure that the general level of safety contemplated by these provisions is maintained under all expected operating conditions, including those not covered specifically by the provisions of this part.

(*c*) A flight shall not be commenced unless the performance information provided in the flight manual indicates that the Standards of 8.14.4 to 8.14.8 can be complied with for the flight to be undertaken.

(*d*) In applying the regulations in this Part, account shall be taken of all factors that significantly affect the performance of the aircraft (such as : mass, operating procedures, the pressure altitude appropriate to the elevation of the aerodrome, temperature, wind, runway gradient and condition of runway, *i.e*. presence of slush, water and/or ice, for landplanes, water surface condition for seaplanes). Such factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aircraft is being operated.

8.14.6.1. Mass Limitations.

(*a*) The mass of the aircraft at the start of take-off shall not exceed the mass at which 8.14.6 is complied with, nor the mass at which 8.14.7 and 8.14.8 are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying 8.14.7 and 8.14.8 and, in respect of alternate aerodromes, 8.14.5(*c*) and 8.14.8.

(*b*) In no case shall the mass at the start of take off exceed the maximum take off mass specified in the flight manual for the pressure altitude appropriate to the elevation of the aerodrome, and if used as a parameter to determine the maximum take off mass, any other local atmospheric condition.

(*c*) In no case shall the estimated mass for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the maximum landing mass specified in the flight manual for the pressure altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

(*d*) In no case shall the mass at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification in Part 16, of Nig. CARs 2012 Volume 2, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the Authority of the State in which the aerodrome is situated.

(*e*) Take-off. The aircraft shall be able, in the event of a critical engine failing at any point in the take-off, either to discontinue the take-off and stop within either the accelerate-stop distance available or the runway available, or to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aircraft is in a position to comply with 8.14.7.

(*f*) In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aircraft prior to take-off.

8.14.6.7. Enroute-One Engine Inoperative.

(*a*) The aircraft shall be able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, to continue the flight to an aerodrome at which the regulation of 8.14.8 can be met, without flying below the minimum obstacle clearance altitude at any point.

8.14.6.8. Landing.

(*a*) The aircraft shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

8.14.7. AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS.

8.14.7.1. General.

(*a*) Where a master minimum equipment list (MMEL) is established for the aircraft type, the operator shall include in the operations manual a minimum equipment list (MEL) approved by the State of Registry of the aircraft which will enable the pilot-in-command to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or systems become inoperative.

(*b*) An operator should provide operations staff and flight crew with an aircraft operating manual, for each aircraft type operated, containing the normal, abnormal and emergency procedures relating to the operation of the aircraft. The manual should be consistent with the aircraft flight manual and checklists to be used. The design of the manual should observe Human Factors principles.

8.14.7.2. Aircraft on all Flights.

(*a*) All aircraft operating under this Part shall be equipped with the required instruments, communication and navigation equipment as prescribed in Part 7 of these regulations and appropriate to the type of flight operation being conducted and the route being flown.

8.14.8. AEROPLANE MAINTENANCE.

8.14.8.1. Operator's Maintenance Responsibilities.

(*a*) An operator shall comply with the requirements of 8.13.5.

(*b*) An operator should ensure that all maintenance personnel receive initial and continuation training acceptable to the State of Registry and appropriate to their assigned tasks and responsibilities. This should include Human Factors and coordination with other maintenance personnel and flight crew.

8.14.8.2. Operator's Maintenance Control Manual.

(*a*) An operator shall provide a maintenance control manual, approved by the Authority as specified in 8.14.8.1, for the use and guidance of maintenance and operations personnel.

8.14.8.3. Maintenance Programme.

(*a*) An operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the Authority or acceptable to the State of Registry, containing the information required by 8.14.8.2. The design and application of the operator's maintenance programme shall observe Human Factors principles according to the State of Registry's guidance material.

(*b*) Copies of all approved amendments to the maintenance programme shall be furnished promptly to all organizations or persons to whom the maintenance programme has been issued.

8.14.8.4. Continuing Airworthiness Information.

(*a*) An operator of an aircraft of a maximum certificated take-off mass in excess of 5 700 kg shall, as prescribed by the State of Registry, ensure that the information resulting from maintenance and operational experience with respect to continuing airworthiness, is transmitted as required in Part of these regulations.

8.14.8.5. Maintenance Release.

(*a*) A maintenance release shall be completed and signed, as prescribed by the State of Registry, to certify that the maintenance work has been performed in accordance with the maintenance programme or other data and procedures acceptable to the State of Registry. Aircraft registered in Nigeria shall comply with the requirement of Nig. CARs 8.3.

(*b*) A maintenance release shall contain a certification including :

(1) Basic details of the maintenance performed ;

(2) The date such maintenance was completed ;

(c) When applicable, the identity of the approved maintenance organization ; and

(*d*) The identity of the person or persons signing the release.

8.14.9. AEROPLANE FLIGHT CREW

8.14.9.1. Composition of the Flight Crew.

(*a*) Designation of pilot-in-command.

An AOC holder shall designate for each flight a pilot to act as pilot-in-command.

(*b*) Flight engineer

When a separate flight engineer's station is incorporated in the design of an aircraft, the flight crew shall include at least one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another flight crew member, holding a flight engineer licence, without interference with regular duties.

8.14.9.2. Flight Crew Member Emergency Duties.

(*a*) An operator shall, for each type of aircraft, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation. Recurrent training in accomplishing these functions shall be contained in the operator's training programme and shall include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the aircraft.

8.14.9.3. Flight Crew Member Training Programmes.

(*a*) An operator shall establish and maintain a training programme that is designed to ensure that a person who receives training acquires and maintains the competency to perform assigned duties, including skills related to human performance. Ground and flight training programmes shall be established, either through internal programmes or through a training services provider, and shall include or make reference to a syllabus for those training programmes in the company operations manual. The training programme shall include training to competency for all equipment installed.

8.14.9.4. Qualifications.

(*a*) Flight crew member licensing

(1) An operator shall :

(*i*) Ensure that each flight crew member assigned to duty holds a valid licence issued by the State of Registry, or if issued by another Contracting State, rendered valid by the State of Registry ;

(*ii*) Ensure that flight crew members are properly rated ; and

(*iii*) Be satisfied that flight crew members are competent to carry out assigned duties.

(*b*) The operator of an aircraft equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collisions.

(*c*) Recent experience - pilot-in-command

(1) An operator shall not assign a pilot to act as pilot-in-command of an aircraft unless that pilot has made at least three take-offs and landings within the preceding 90 days on the same type of aircraft or in a flight simulator approved for the purpose.

(*b*) Recent experience-co-pilot.

(1) An operator shall not assign a co-pilot to operate at the flight controls of an aircraft during take-off and landing unless that pilot has made at least three take-offs and landings within the preceding 90 days on the same type of aircraft or in a flight simulator approved for the purpose.

(*e*) Pilot proficiency checks

(1) An operator shall ensure that piloting technique and the ability to execute emergency procedures is checked periodically in such a way as to demonstrate the pilot's competence. Where the operation may be conducted under the instrument flight rules, an operator shall ensure that the pilot's competence to comply with such rules is demonstrated to either a check pilot of the operator or a representative of the State issuing the pilot licence.

8.14.10. Flight Operations Officer/Flight Dispatcher.

(*a*) An operator shall ensure that any person assigned as a flight operations officer/flight dispatcher is trained and maintains familiarization with all features of the operation which are pertinent to their duties, including knowledge and skills related to Human Factors.

8.14.10. Manuals, Logs and Records.

8.14.10.1. Operator's Maintenance Control Manual.

(*a*) An operator's maintenance control manual provided in accordance with 8.14.5.2, which may be issued in separate parts, should be developed according to the State of Registry's guidance material, and should at a minimum contain information about :

(1) The means for complying with the procedures required by 8.14.5.1 ;

(2) The means of recording the names and duties of the person or persons required by 8.14.5.1 ;

(3)The maintenance programme required by 8.14.5.2 ;

(4)The methods used for the completion and retention of the operator's maintenance records required by 8.14.5.5 ;

(5) The procedures for complying with the service information reporting requirements of Part 5.5.1.4 of these regulations.

(6) The procedures for implementing action resulting from mandatory continuing airworthiness information ;

(7) A system of analysis and continued monitoring of the performance and efficiency of the maintenance programme, in order to correct any deficiency in that programme ;

(8) The aircraft types and models to which the manual applies ;

(9) The procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified ; and

(10) Procedures for advising the State of Registry of significant in-service occurrences.

8.14.10.2. Maintenance Programme.

(*a*) A maintenance programme for each aircraft as required by8.16.5 shall contain the following information :

(1) Maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aircraft ;

(2) When applicable, a continuing structural integrity programme ;

(3) Procedures for changing or deviating from a) and b) above as approved by the State of Registry ; and

(4) When applicable and approved by the State of Registry, condition monitoring and reliability programme descriptions for aircraft systems, components and engines.

(*b*) Maintenance tasks and intervals that have been specified as mandatory in approval of the type design, or approved changes to the maintenance programme, shall be identified as such.

(*c*) The maintenance programme shall be based on maintenance programme information made available by the State of Design or by the organization responsible for the type design, and any additional applicable experience.

8.14.10.3. Flight Recorder Records.

(*a*) The operator/owner of the aircraft, or in the case where it is leased, the lessee, shall ensure, to the extent possible, in the event the aircraft becomes involved in an accident or incident, the preservation of all related flight recorder records and, if necessary, the associated flight recorders, and their retention in safe custody pending their disposition as determined by the Accident Investigation Bureau.

8.14.11. Cabin Crew

8.14.11.1. Assignment Of Emergency Duties.

(*a*) The requirement for cabin crew for each type of aircraft shall be determined by the operator, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aircraft, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The operator shall assign these functions for each type of aircraft.

8.14.11.2. Cabin Crew at Emergency Evacuation Stations.

(*a*) When cabin crew are required by the Authority, each cabin crew member assigned to emergency evacuation duties shall occupy a seat provided in accordance with Part 7 of these regulations during take-off and landing and whenever the pilot-in-command so directs.

8.14.11.3. Protection of Cabin Crew During Flight.

(*a*) Each cabin crew member shall be seated with seat belt or, when provided, safety harness fastened during take-off and landing and whenever the pilot-in-command so directs.

8.14.11.4. Training.

(*a*) An operator shall ensure that a training programme is completed by all persons before being assigned as a cabin crew member.

(*b*) An operator shall establish and maintain a cabin crew training programme that is designed to ensure that persons who receive training acquire the competency to perform their assigned duties and includes or makes reference to a syllabus for the training programme in the company operations manual. The training programme should include Human Factors training.

8.14.12. Security Programme

8.14.12.1. Security Programme.

(*a*) Any person engaged in Corporate Aviations Operations using aircraft with a maximum take-off mass greater than 5700 kg, shall establish, implement and maintain a written operator security programme that meets the requirements of the Authority.

PART 8—IMPLEMENTING STANDARDS

For ease of reference, the number assigned to each implementing standard corresponds to its associated regulation. For example, IS : 8.2.1.5 would reflect a standard required in Subsection 8.2.1.5.

PART 8—IMPLEMENTING STANDARDS

IS : 8.5.1.21. Meteorological Observations.

Note-The procedures for making meteorological observations on board aircraft in flight and for recording and reporting them are contained in *annex* 3, the PANS-ATM (Doc 4444) and the appropriate regional supplementary procedures (Doc 7030).

IS : 8.5.1.29. Passenger Health and Safety.

(*a*) A communicable disease could be suspected and require further evaluation if a person has a fever (temperature 38°C/100°F or greater) that is associated with certain signs or symptoms such as :

(*i*) appearing obviously unwell,

(*ii*) persistent coughing,

(*iii*) impaired breathing,

(*iv*) persistent diarrhoea,

(*v*) persistent vomiting,

(*vi*) skin rash,

(*vii*) bruising or bleeding without previous injury or

(*viii*) irrational behaviour.

(*b*) Handling of the sick passenger.

Cabin crewmember assigned to attend to the sick passenger shall be relieved of other duties during the flight.

The cabin crewmember assigned to attend to the sick passenger shall put on appropriate protective apparel

(*c*) Isolation of the sick passenger.

The sick passenger shall be isolated from any further contact with the rest of the passengers and crew

(*d*) The Pilot In Command report to Air Traffic Control shall include the following :

(*i*) Aircraft Identification.

(*ii*) Departure Aerodrome

(*iii*) Destination Aerodrome.

(*iv*) Estimated Time of Arrival.

(*v*) Number of persons on board.

(*vi*) Number of suspected case(s) on board ; and (*vii*) Nature of the public health risk, if known

(*e*) The Pilot in Command shall complete the General Declaration form and submit copies to the Authority and the Port Health Authority.

IS : 8.7.2.2(*B*) GENERAL-ROTORCRAFT CLASS 1, 2, AND 3 CODE OF PERFORMANCE

(*a*) The following guidance material is the basis of the code of helicopter performance referenced in Part 8, Subpart : 8.7.2-Aircraft Used in Commercial Air Transport.

(*b*) Definitions :

(1) Category A. With respect to helicopters, means a multi-engined helicopter designed with engine and system isolation features and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

(2) Category B. With respect to helicopters, means a single engine or multi-engined helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed

(*c*) General guidance :

(1) Helicopters operating in performance Classes 1 and 2 should be certificated in

Category A

(2) Helicopters operating in performance Class 3 should be certificated in either Category A or Category B (or equivalent)

(3) Except as permitted by the appropriate Authority :

(*i*) Take-off or landing from/to heliports in a congested hostile environment should only be conducted in performance Class 1.

(*ii*) Operations in performance Class 2 should only be conducted with a safe forced landing capability during take-off and landing.

(*iii*) Operations in performance Class 3 should only be conducted in a non-hostile environment

(4) The Authority may grant a waiver from the provisions of (3) (*i*) (*ii*) and (*iii*) upon receiving a commercial air transport operator's application for waiver and undertaking a risk assessment of the operational conditions proposed, including :

(*i*) The type of operation and the circumstances of the flight ;

(*ii*) The area/terrain over which the flight is being conducted ;

(*iii*) The probability of a critical power-unit failure and the consequence of such an event ;

(*iv*) The procedures to maintain the reliability of the power-unit(s) ;

(*v*) The training and operational procedures to mitigate the consequences of the critical power-unit failure ; and

(*vi*) Installation and utilisation of a usage monitoring system.

IS : 8.7.2.3. Single and Multi-engine Aeroplane Operations

(*a*) In addition to the requirements in outlined under Subsection8.7.2.3, an AOC holder seeking approval from the Authority to operate single-engine turbine-powered aeroplanes at night and/or in IMC shall comply with the additional requirements of this implementing standard.

(*b*) An AOC holder shall not operate single-engine, turbine-powered aeroplanes at night and/or in IMC unless the following airworthiness and operational requirements have been satisfied by the operator and approved by the Authority.

(1) Turbine Engine Reliability.

(2) Turbine engine reliability shall be shown to have a power loss rate of less than 1 per 100000 engine hours.

Note : Power loss in this context is defined as any loss of power, the cause of which may be traced to faulty engine or engine component design or installation, including design or installation of the fuel ancillary or engine control systems.

(*c*) The operator shall be responsible for engine trend monitoring.

(*d*) To minimize the probability of in-flight engine failure, the engine shall be equipped with :

(1) An ignition system that activates automatically, or is capable of being operated manually for take-off and landing, and during flight, in visible moisture

(2) A magnetic particle detection or equivalent system that monitors the engine, accessories gearbox, and reduction gearbox, and which includes a flight deck caution indication ; and

(3) An emergency engine power control device that permits continuing operation of the engine through a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel control unit.

(*e*) Systems and Equipment. Single-engine turbine-powered aeroplanes approved to operate at night and/or in IMC shall be equipped with the following systems and equipment intended to ensure continued safe flight and to assist in achieving a safe forced landing after an engine failure, under all allowable operating conditions :

(1) Two separate electrical generating systems, each one capable of supplying all probable combinations of continuous in-flight electrical loads for instruments, equipment and systems required at night and/or in IMC ;

(2) A radio altimeter ;

(3) An emergency electrical supply system of sufficient capacity and endurance, following loss of all generated power, to as a minimum :

(*i*) Maintain the operation of all essential flight instruments, communication ; and

(*ii*) Navigation systems during a descent from the maximum certificated altitude in a glide configuration to the completion of a landing ;

(*iii*) Lower the flaps and landing gear, if applicable ;

(*iv*) Provide power to one pitot heater, which must serve an air speed indicator clearly visible to the pilot ;

(*v*) Provide for operation of the landing light specified in (*e*)(10) below ;

(*vi*) Provide for one engine restart, if applicable ; and

(*vii*) Provide for the operation of the radio altimeter ;

(4) Two attitude indicators, powered from independent sources ;

(5) A means to provide for at least one attempt at engine re-start ;

(6) Airborne weather radar ;

(7) A certified area navigation system capable of being programmed with the positions of aerodromes and safe forced landing areas, and providing instantly available track and distance information to those locations ;

(8) For passenger operations, passenger seats and mounts which meet dynamically-tested performance standards and which are fitted with a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat ;

(9) In pressurised aeroplanes, sufficient supplemental oxygen for all occupants for descent following engine failure at the maximum glide performance from the maximum certificated altitude to an altitude at which supplemental oxygen is no longer required ;

(10) A landing light that is independent of the landing gear and is capable of adequately illuminating the touchdown area in a night forced landing ; and

(11) An engine fire warning system.

(*f*) Minimum Equipment List (MEL). An AOC holder shall develop an MEL approved by the Authority that is appropriate to the type of single-engine turbine-powered aeroplane operated specifying the operating equipment required for night and/or IMC operations, and for day/VMC operations.

(*g*) Aeroplane Flight Manual (AFM) Information. The AFM shall include limitations, procedures, approval status and other information relevant to operations by single-engine turbine-powered aeroplanes at night and/or in IMC.

(*h*) Event Reporting. An AOC holder operating turbine-powered aeroplanes at night and/or in IMC shall report all significant failures, malfunctions or defects to the Authority who in turn will notify the State of Design.

(*i*) Operator Planning. Each AOC holder operating single-engine turbine-powered aeroplanes at night and/or in IMC shall take account of all relevant information in the assessment of intended routes or areas of operations, including the following :

(1) The nature of the terrain to be overflown, including the potential for carrying out a safe forced landing in the event of an engine failure or major malfunction ;

(2) Weather information, including seasonal and other adverse meteorological influences that may affect the flight ; and

(3) Other criteria and limitations as specified by the Authority.

(*j*) Each AOC holder shall identify aerodromes or safe forced landing areas available for use in the event of engine failure and the position of these shall be programmed into the area navigation system.

Note 1 : A '*safe*' forced landing in this context means a landing in an area at which it can reasonably be expected that it will not lead to serious injury or loss of life, even though the aeroplane may incur extensive damage.

Note 2 : Operation over routes and in weather conditions that permit a safe forced landing in the event of an engine failure, as specified in Sub-section 8.8.1.30(*a*) is not required for aeroplanes approved in accordance with Sub-section 8.8.1.30(*a*)(1). The availability of forced landing areas at all points along a route is not specified for these aeroplanes because of the very high engine reliability, additional systems and operational equipment, procedures and training requirements specified in this implementing standard.

(*k*) Flight Crew Experience, Training and Checking.

(1) No person may serve and no AOC holder shall use a flight crewmember in single-engine turbine-powered aeroplanes engaged in commercial air transport unless he or she has completed the appropriate flight crewmember training as specified in this Part and approved by the Authority.

(2) The AOC holder's approved flight crew training and checking shall be appropriate to night and/or IMC operations by single engine turbine-powered aeroplanes, covering normal, abnormal and emergency procedures and, in particular, engine failure, including descent to a forced landing in night and/or in IMC conditions.

(*l*) Route Limitations Over Water.

(1) An AOC holder shall not conduct over water operations using single-engine turbine-powered aeroplanes operating at night and/or in IMC except in areas of operation or over specific routes identified in the AOC holder's operation specifications.

(2) No AOC holder may conduct over water operations using single-engine turbine-powered aeroplanes operating at night and/or in IMC except in accordance with procedures approved by the Authority in the AOC holder's operations manual for over water operations covering flight beyond gliding distance from an area suitable for a safe forced landing/ ditching having regard to the characteristics of the aeroplane, seasonal weather influences, including likely sea state and temperature, and the availability of search and rescue services.

(*m*) Operator Certification or Validation.

(1) An AOC holder applying for operations specifications granting authorisation to conduct single-engine turbine-powered aeroplane operations at night and/or in IMC shall demonstrate to the Authority consistent with Part 9 Air Operator Certification & Administration, the ability to conduct operations by single-engine turbine-powered aeroplanes at night and/or in IMC through a certification and approval process specified by the Authority.

IS : 8.8.1.7. Instrument Approach Operating Minima

(*a*) Each operator establishing aerodrome-operating minima shall have its method for determining such minima approved by the Authority.

(*b*) Each operator's method for determining aerodrome-operating minima shall accurately account for—

(1) The type, performance and handling characteristics of the aircraft ;

(2) The composition and experience of the flight crew ;

(3) The dimensions and characteristics of the runways selected for use ;

(4) Aircraft equipment used for navigation and aircraft control during the approach to landing and the missed approach ;

(5) Obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the intended instrument approach procedures ;

(6)The means used to determine and report meteorological conditions ; and

(7) The obstacles in the climb out areas and the necessary clearance margins.

(8) The adequacy and performance of the available visual and non-visual ground aids.

(9) The declared distances, for helicopters.

IS : 8.8.1.9. Category II and III Manual

(*a*) Application for approval. An applicant for approval of a Category II or III manual or an amendment to an approved Category II manual shall submit the proposed manual or amendment to the Authority. If the application requests an evaluation programme, it shall include the following :

(1) The location of the aircraft and the place where the demonstrations are to be conducted.

(2) The date the demonstrations are to commence (at least 10 days after filing the application).

(*b*) Contents. Each Category II or III manual must contain :

(1) The registration mark, make, and model of the aircraft to which it applies.

(2) A maintenance programme.

(3) The procedures and instructions related to recognition of DH, use of runway visual range (RVR) information, approach monitoring, the decision region (the region between the middle marker and the decision height), the maximum permissible deviations of the basic ILS indicator within the decision region, a missed approach, use of airborne low approach equipment, minimum altitude for the use of the autopilot, instrument and equipment failure warning systems, instrument failure, and other procedures, instructions, and limitations that may be found necessary by the Authority.

Note 1 : Category II approval is required to prior to obtaining Category III approval.

Note 2 : ICAO Doc 9365, Manual on All Weather Operations, provides additional guidance.

IS : 8.8.1.28. Interception of Civil Aircraft

(*a*) Nigeria shall observe the following principles regarding the interception of civil aircraft.

(1) Interception of civil aircraft will be undertaken only as a last resort.

(2) If undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome.

(3) Practice interception of civil aircraft will not be undertaken.

(4) Navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established.

(5) In the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

Note : In the unanimous adoption by the 25th Session (Extraordinary) of the ICA0 Assembly on 10 May 1984 of Article 3 bis to the Convention on International Civil Aviation, the Contracting States have recognised that "*every State must refrain from resorting to the use of weapons against civil aircraft in flight*."

(*b*) Nigeria shall ensure that :

(1) A standard method has been established and made available to the public for the manoeuvring of aircraft intercepting a civil aircraft that is designed to avoid any hazard for the intercepted aircraft.

(2) Provision is made for the use of secondary surveillance radar or ADS-B, where available, to identify civil aircraft in areas where they may be subject to interception.

(*c*) The PIC of an aircraft that is intercepted by another aircraft shall immediately :

(1) Follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in item (*e*) below.

(2) Notify, if possible, the appropriate air traffic services unit.

(3) Attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz.

(4) If equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

(5) If equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

(*d*) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

(*e*) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

(*f*) Radio communication during interception. If radio contact is established during interception but communication in a common language is not possible, the PIC of each involved aircraft shall attempt to convey instructions, acknowledgement of instructions and essential at information by using the phrases and pronunciations in Table 1below and transmitting each phrase twice :

Table 1

Phrases for use by INTERCEPTING aircraft			Phrases for use by INTERCEPTED aircraft		
Phrase	Pronunciation 1	Meaning	Phrase	Pronunciation 1	Meaning
CALL SIGN	KOL SA-IN	What is your call sign?	CALL SIGN (call sign)2	KOL SA-IN (call sign)	My call sign is (call sign)
FOLLOW	FOL-LO	Follow me	WILCO	VILL-KO	Understood Will comply
DESCEND	DEE-SEND	Descend for landing	CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE-PEET	Repeat your instruction
PROCEED	PRO-SEED	You may proceed	AM LOST	AM LOSST	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK3	HI-JACK	I have been hijacked
			LAND. (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE-SEND	I require descent

1. In the second column, syllables to be emphasised are underlined.

2. The call sign required to be given is that used in radiotelephone, communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

3. Circumstances may not always permit, nor make desirable, the use of the phrase "*HIJACK*".

(*g*) The signals in Table 2shall be used by the pilots of each involved aircraft in the event of interception. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table 2

Series	*Intercepting Aircraft Signal*	*Meaning*	*Intercepted Aircraft Responds*	*Meaning*
1	DAY or NIGHT ¾ Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left, (or to the right in the case of a helicopter) on the desired heading. *Note* : Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. *Note* : If the intercepting aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it passes the intercepted aircraft.	You have been intercepted. Follow me.	DAY or NIGHT ¾Rocking aircraft. flashing navigational lights at irregular intervals and following.	Understood, will comply.
2	DAY or NIGHT ¾ An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT ¾Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT ¾ Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover hear to the landing area.	Land at this aerodrome.	DAY or NIGHT ¾Lowering landing gear (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

(*g*) The signals in Table 2shall be used by the pilots of each involved aircraft in the event of interception. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table 2

Series	*Intercepting Aircraft Signal*	*Meaning*	*Intercepted Aircraft Responds*	*Meaning*
4	DAY or NIGHT–Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300m (1000ft) but not exceeding 600m (2000ft) (in the case of a helicopter, at a height exceeding 50m (170ft) but not exceeding 100m (330ft) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT—If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses he Series 1 signals prescribed for intercepting aircraft. If it is decided to release the incepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT—Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply. In distress.	DAY or NIGHT—Use Series 2 signals prescribed for intercepting aircraft.	
6	DAY or NIGHT ¾ Irregular flashing of all available lights.		DAY or NIGHT—Use Series 2 signals prescribed for intercepting aircraft.	Understood

IS : 8.8.1.33. Remotely Piloted Aircraft (RPA).

(*a*) Nigeria Operator's Application Form to operate Remotely Piloted Aircraft (RPA) within (NIGERIA).

Application Form for Remotely Piloted Aircraft Operations by a (NIGERIA) Operator
(*To be completed by a foreign operator for an approval to conduct operations in NIGERIA*)

Section 1. Applicant information	
1*a*. Operator, or if applicable, Company registered name and trading name if different. Address : mailing address ; telephone ; fax; and e-mail.	2. Pilot(s) of remote aircraft. Address : mailing address ; telephone; fax ; and e-mail.
1*b*. RPA operator certificate number:	2*b*. Remote pilot licence number(s) for each pilot :

3. Insurance Information : Name of Insurer and address, including telephone : fax and e-mail.

Section 2 : Aircraft identification

1. Aircraft registration number : ....
2. Aircraft identification to be used in radiotelephony, if applicable : ....
3. Aircraft type : ....
4. Aircraft description (eg. Engines, propellers, wing span) : ....
5. Aircraft controlled via

☐ Line of sight

☐ Satellite

☐ Computer program

☐ Other...

6. Aircraft equipment (eg. Sprayers,-camera, type, live feed or photographs) : ....
7. If camera equipped, aircraft camera transmission destination :

☐ Operator/Company home base

☐ Other (identify) : ....

8. Frequency band to be used : ....
9. Aircraft radio station licence number, if applicable : ....

Section 3. Description of intended operation

1. Proposed type(s) of operation :

☐ Aerial mapping ; ☐ Aerial surveying ; ☐ Aerial photography ; ☐ Aerial advertising

☐ Aerial surveillance and inspection ; ☐ Forest fire management ; ☐ Meterological service

☐ Search and rescue ; ☐ Accident/incident investigation ;

☐ Cargo, indicate type of cargo : ....

Is cargo classified as dangerous goods : ☐ yes ; ☐ no

Is payload internal ☐ or external ☐

☐ Other : ....
....

2. Flight Rules : ☐ VFR ; ☐ IFR ; ☐ IMC ; ☐ VLOS (Visual Line of Sight)

3. Dates/Geographic areas/description of intended operations and proposed route structure :

a. Date(s) of intended flight (dd/mm/yyyy) : ....

b. Point of departure : ....

c. Destination : ....

d. Route to be followed : ....

e. Cruising speeds(s) : ....

f. Cruising level(s)/altitude : ....

g. Duration/frequency of flight : ....

h. Emergency set down sites along proposed route : ....

i. For emergency landings :

1. responsible person for aircraft recovery : ....
2. responsible person for clean up if impact occurs : ....

j. Emergency contact telephone numbers : ....

Section 4. RPA Characteristics

1. RPA Characteristics :

(*a*) Type of aircraft :

(*b*) Maximum certificated take-off mass :

(*c*) Number of engines :

(*d*) Take-off and landing requirements :

(*e*) Detect and avoid capabilities :

(*f*) Number and location of remote pilot stations as well as handover procedures between remote pilot stations, if applicable :

(*g*) payload information/description :

(*h*) Visual control for takeoff and/or landing or takeoff and landing handled through camera on board

2. Performance characteristics :

(*a*) Operating speeds : ....

(*b*) Typical and maximum climb rates : ....

(*c*) Typical and maximum descent rates : ....

(*d*) Typical and maximum turn rates : ....

(*e*) Maximum aircraft endurance : ....

(*f*) Other, such as limitations for wind, icing, precipitation : ....

4. Communications, Navigation and Surveillance capabilities

a. Aeronautical safety communications frequencies and equipment :

(*i*) ATC communications, including any alternate means of communication : ....

(*ii*) Command and control links (C2) including performance parameters and designated operational coverage area ; ....

iii. Communications between remote pilot and RPA observer, if applicable ; ....

b. Navigation equipment ; and ....

c. Surveillance equipment (e.g. SSR transponder, ADS-B out). ....

5. Emergency procedures :

(*a*) Communications failure with ATC : ....

(*b*) C2 failure : ....

(c) Remote pilot RPA observer communications failure, if applicable : ....

(d) Satellite failure, if applicable : ....

(e) Recovery during unplanned landings : ....

(f) Communication procedure with local law enforcement in case of impact : ....

Atach copies of the following, in English translation if original documents are not in the English language :

* Insurance certificate ;
* Noise certification document issued in accordance with ICAO *Annex* 16 ;
* Operator security programme ; and
* Proposed flight plan to be filed with ATC

Signature of Applicant : Date (dd/mm/yyyy) : Name and title :

Section 5 to be completed by the CAA

Evaluated by (name and office) : CAA decision :

0 Approval granted 0 Not approved

Remarks :

Signature of CAA representative : Date (dd/mm/yyyy) :

IS : 8.8.2.11. Universal Aviation Signals.

(*a*) Distress signals. The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested :

*Note*1 : None of the provisions in this section shall prevent the use, by an aircraft in distress, of any means at its disposal to attract attention, make known its position and obtain help.

Note 2 : For full details of telecommunication transmission procedures for the distress and urgency signals, see ICAO *Annex* 10, Volume II, Chapter 5.

Note 3 : For details of the search and rescue visual signals, see ICAO *Annex* 12.

(1) A signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (***— — — ***) in the Morse Code.

(2) A signal sent by radiotelephony consisting of the spoken word MAYDAY.

(3) Rockets or shells throwing red lights, fired one at a time at short intervals.

(4) A parachute flare showing a red light.

Note : Article 41 of the ITU Radio Regulations (Nos. 3268, 3270 and 3271 refer) provides information on the alarm signals for actuating radiotelegraph and radiotelephone auto-alarm systems: 3268 The radiotelegraph alarm signal consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between consecutive dashes one second. It may be transmitted by hand but its transmission by means of an automatic instrument is recommended. 3270 The radiotelephone alarm signal consists of two substantially sinusoidal audio frequency tones transmitted alternately. One tone shall have a frequency of 2200 Hz and the other a frequency of 1300 Hz, the duration of each tone being 250 milliseconds. 3271 The radiotelephone alarm signal, when generated by automatic means, shall be sent continuously for a period of at least thirty seconds but not exceeding one minute; when generated by other means, the signal shall be sent as continuously as practicable over a period of approximately one minute.

(*b*) The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance :

(1) The repeated switching on and off of the landing lights ; or

(2) The repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

(*c*) The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight :

(1) A signal made by radiotelegraphy or by any other signalling method consisting of the group XXX.

(2) A signal sent by radiotelephony consisting of the spoken words PAN, PAN.

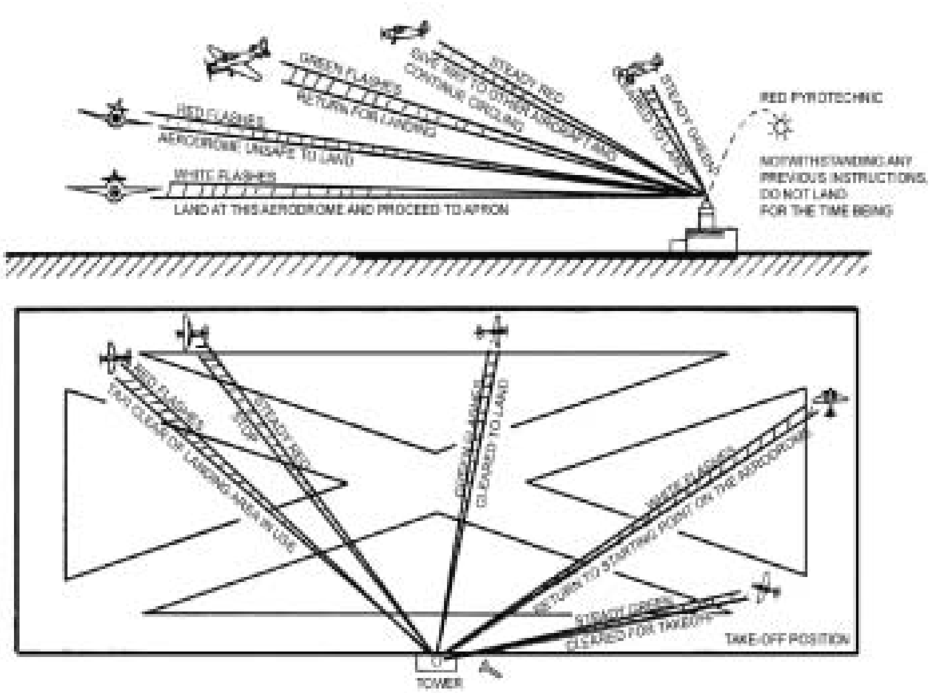
(*d*) Visual signals used to warn an unauthorised aircraft. By day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars will indicate to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited, or danger area, and that the aircraft is to take such remedial action as may be necessary.

(*e*) Signals for aerodrome traffic. Aerodrome controllers shall use and pilots shall obey the following light and pyrotechnic signals :

		From Aerodrome Control to :	
Light		Aircraft in flight	Aircraft on the ground
Directed towards aircraft concerned	Steady green.	Cleared to land.	Cleared for takeoff.
(See Figure 1.1)	Steady red.	Give way to other aircraft and continue circling.	Stop
	Series of green flashes.	Return for landing.*	Cleared to taxi.
	Series of red flashes.	Aerodrome unsafe, do not land.	Taxi clear of landing area in use.
	Series of white flashes	Land at this aerodrome and proceed to apron*.	Return to starting point on the aerodrome
	Red pyrotechnic	Notwithstanding any previous instructions, do not land for the time being	

* Clearances to land and to taxi will be given in due course.

Figure 8.1



(*f*) Pilots shall acknowledge aerodrome controller signals as follows :

(1) When in flight—

(*i*) During the hours of daylight by rocking the aircraft's wings.

Note : This signal should not be expected on the base and final legs of the approach.

(*ii*) During the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

(*g*) When on the ground—

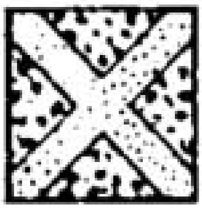
(1) During the hours of daylight by moving the aircraft's ailerons or rudder.

(2) During the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

(*h*) Aerodrome authorities shall use the following visual ground signals during the following situations :

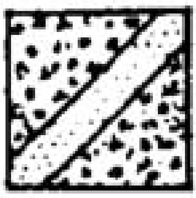
(1) Prohibition of landing. A horizontal red square panel with yellow diagonals (Figure 8.2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

Figure 8.2



(2) *Need for special precautions while approaching or landing* : A horizontal red square panel with one yellow diagonal (Figure 8.3) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing.

Figure 8.3



(3) *Use of runways and taxiways* :

(*i*) A horizontal white dumb-bell (Figure 8.4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

Figure 8.4.

(*ii*) The same horizontal white dumb-bell as in Figure 8.4, but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 8.5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.

Figure 8.5

(4) *Closed runways or taxiways* : Crosses of a single contrasting colour, yellow or white (Figure 8.6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

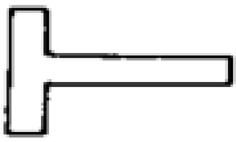
Figure 8.6

(5) *Directions for landing or takeoff* :

(*i*) A horizontal white or orange landing T (Figure 8.7) indicates the direction to be used by aircraft for landing and rake-off, which shall be in a direction parallel to the shaft of the T towards the cross arm.

Note : When used at night, the landing T is either illuminated or outlined in white coloured lights.

Figure 8.7

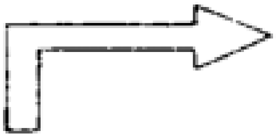


(*ii*) A set of two digits (Figure 8.8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for takeoff, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

Figure 8.8

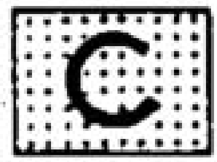
(6) *Right-hand traffic* : When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure 8.9) indicates that turns are to be made to the right before landing and after takeoff.

Figure 8.9



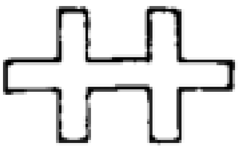
(7) *Air traffic services reporting office* : The letter C displayed vertically in black against a yellow background (Figure 8.10) indicates the location of the air traffic services reporting office.

Figure 8.10



(8) *Glider flights in operation* : A double white cross displayed horizontally (Figure 8.11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

Figure 8.11



(9) The following marshalling signals shall be used from a signalman to an aircraft.

Note : These signals are designed for use by the signalman, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position.

(10) For fixed-wing aircraft, the signalman shall be positioned forward of the left-wing tip within view of the pilot and, for helicopters, where the signalman can best be seen by the pilot.

Note 1 : The meaning of the relevant signals remains the same if bats, illuminated wands or torchlights are held.

Note 2 : The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No. I engine being the port outer engine).

Note 3 : Signals marked with an asterisk are designed for use to hovering helicopters.

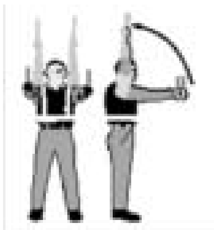
(11) Prior to using the following signals, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft might otherwise strike.

Note : The design of many aircraft is such that the path of the wing tips, engines and other extremities cannot always be monitored visually from the flight deck while the aircraft is being manoeuvred on the ground.

1. Wingwalker/guide.

Raise right hand above head level with wand pointing up ; move left-hand wand pointing down toward body.

Note : This signal provides an indication by a person positioned at the aircraft wing tip to the pilot/ marshaller/ push-back operator that the aircraft movement on/off a parking position would be unobstructed.

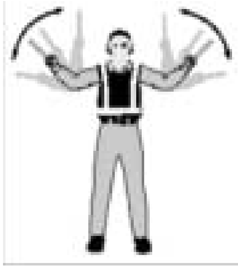


2. Identify gate

Raise fully extended arms straight above head with wands pointing up.

3. Proceed to next signalman or as directed by tower/ ground control

Point both arms upward ; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.



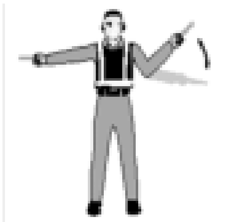
4. Straight ahead

Bend extended arms at elbows and move wands up and down from chest height to head.

5(*a*) Turn left (from pilot's point of view)

With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

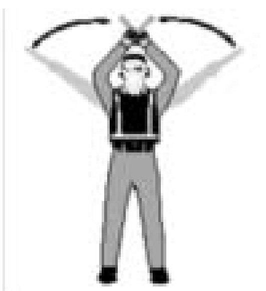
5(*b*) Turn right (from pilot's point of view)



With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

6(*a*) Normal stop

Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.



6(*b*) Emergency stop

Abruptly extend arms and wands to top of head, crossing wands.

7(*a*) Set brakes

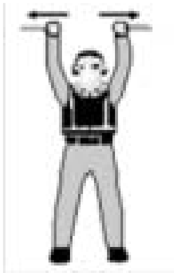
Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of "thumbs up" acknowledgement from flight crew.

7(*b*) Release brakes

Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. Do not move until receipt of "thumbs up" acknowledgement from flight crew

8(*a*) Chocks inserted

With arms and wands fully extended above head, move wands inward in a "jabbing" motion until wands touch. Ensure acknowledgement is received from flight crew.

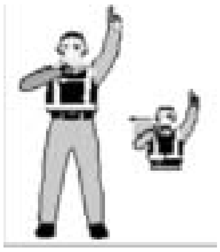


8(*b*) Chocks removed

With arms and wands fully extended above head, move wands outward in a "jabbing" motion. Do not remove chocks until authorised by flight crew.

9. Start engine(s)

Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.

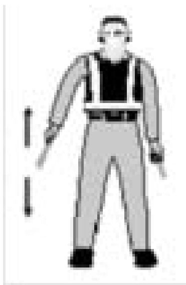


10. Cut engines

Extend arm with wand forward of body at shoulder level ; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.

11. Slow down

Move extended arms downwards in a "*patting*" gesture, moving wands up and down from waist to knees.



12. Slow down engine(s) on indicated side

With arms down and wands toward ground, wave either right or left wand up and down indicating engine(s) on left or right side respectively should be slowed down.

13. Move back

With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6(*a*)
or 6(*b*).

14 (*a*) Turns while backing (for tail to starboard)

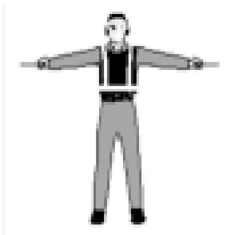
Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.

14 (*b*) Turns while backing (for tail to port)

Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.

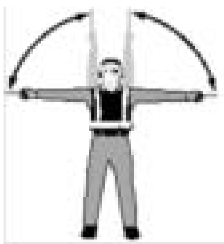
15. Affirmative/all clear

Raise right arm to head level with wand pointing up or display hand with "thumbs up"; left arm remains at side by knee.



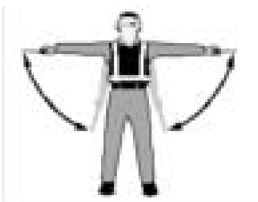
16. Hover

Fully extend arms and wands at a 90-degree angle to sides.



17. Move upwards

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent.



18. Move downwards

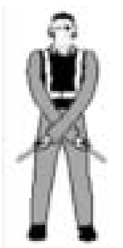
Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downwards. Speed of movement indicates rate of descent.

19(*a*) Move horizontally left (from pilot's point of view)

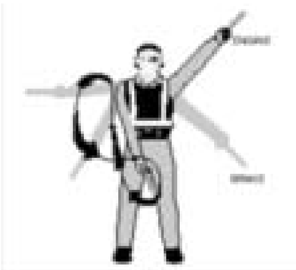
Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion.

19(*b*) Move horizontally right (from pilot's point of view)

Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.

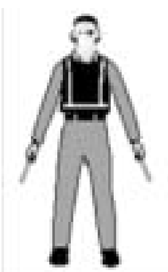


20. Land
Cross arms with wands downwards and in front of body.



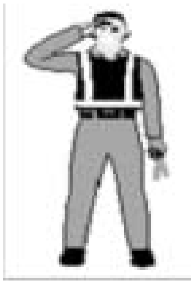
21. Fire

Move right-hand wand in a "*fanning*" motion from shoulder to knee, while at the same time pointing with left-hand wand to area of fire.



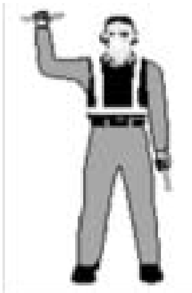
22. Hold position/stand by

Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.



23. Dispatch aircraft

Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.



24. Do not touch controls (technical/servicing communication signal)

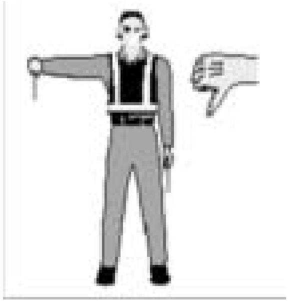
Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.

25. Connect ground power (technical/servicing communication signal)

Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand into and touch open palm of left hand (forming a "*T*"). At night, illuminated wands can also be used to form the "*T*" above head.

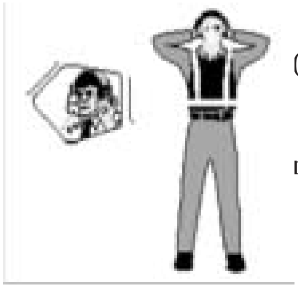
26. Disconnect power (technical/servicing communication signal)

Hold arms fully extended above head with finger tips of right hand touching open horizontal palm of left hand (forming a "*T*") ; then move right hand away from the left. Do not disconnect power until authorised by flight crew. At night, illuminated wands can also be used to form the "*T*" above head.



27. Negative (technical/servicing communication signal)

Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with "thumbs down"; left hand remains at side by knee.



28. Establish communication via interphone (technical/servicing communication signal)

Extend both arms at 90 degrees from body and move hands to cup both ears.

29. Open/close stairs (technical/servicing communication signal)

With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder.

Note : This signal is intended mainly for aircraft with the set of integral stairs at the front.

(*i*) Signals from the pilot of an aircraft to a signalman.

(1) The PIC or CP shall use the following signals when communicating with a signalman :

Note 1 : These signals are designed for use by a pilot in the cockpit with hands plainly visible to thesignalman, and illuminated as necessary to facilitate observation by the signalman.

Note 2 : The aircraft engines are numbered in relation to the signalman facing the aircraft, from right to left (i.e. No. I engine being the port outer engine).

(2) Brakes engaged : Raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.

(3) Brakes released. Raise arm, with fist clenched, horizontally in front of face, then extend fingers.

Note : The moment the fist is clenched or the fingers are extended indicates, respectively, the moment of brake engagement or release.

(4) Insert chocks : Arms extended, palms outwards, move hands inwards to cross in front of face.

(5) Remove chocks : Hands crossed in front of face, palms outwards, move arms outwards.

(6) Ready to start engine(s) : Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

Table of Cruising Levels

IS : 8.8.3.4.—(*a*) The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of :

(1) Flight levels, for flights at or above the lowest usable flight level or, where applicable, above the transition altitude ;

(2) Altitudes, for flights below the lowest usable flight level or, where applicable, at or below the transition altitude.

(*b*) The PIC shall observe the following cruising levels in areas where, on the basis of regional air navigation agreement and in accordance with conditions specified therein, a vertical separation minimum (VSM) of 300 m (1000 ft) is applied between FL 290 and FL 410 inclusive :*

TRACK**											
From 000 Degrees to 179 Degrees***						From 180 Degrees to 359 Degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
	Altitude			Altitude			Altitude			Altitude	
FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet
-90	—	—	—	—	—	0	—	—	—	—	—
10	300	1000	—	—	—	20	600	2000	—	—	—
30	900	3000	35	1050	3500	40	1200	4000	45	1350	4500
50	1500	5000	55	1700	5500	60	1850	6000	65	2000	6500
70	2150	7000	75	2300	7500	80	2450	8000	85	2600	8500
90	2750	9000	95	2900	9500	100	3050	10000	105	3200	10500
110	3350	11000	115	3500	11500	120	3650	12000	125	3800	12500
130	3950	13000	135	4100	13500	140	4250	14000	145	4400	14500
150	4550	15000	155	4700	15500	160	4900	16000	165	5050	16500
170	5200	17000	175	5350	17500	180	5500	18000	185	5650	18500
190	5800	19000	195	5950	19500	200	6100	20000	205	6250	20500
210	6400	21000	215	6550	21500	220	6700	22000	225	6850	22500
230	7000	23000	235	7150	23500	240	7300	24000	245	7450	24500
250	7600	25000	255	7750	25500	260	7900	26000	265	8100	26500
270	8250	27000	275	8400	27500	280	8550	28000	285	8700	28500
290	8850	29000				300	9150	30000			
310	9450	31000				320	9750	32000			
330	10050	33000				340	10350	34000			
350	10650	35000				360	10950	36000			
370	11300	37000				380	11600	38000			
						400	12200	40000			
410	12500	41000				430	13100	43000			
450	13700	45000				470	14350	47000			
490	14950	49000				510	15550	51000			
etc.	etc.	etc.				etc.	etc.	etc.			

* Except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of 300 m (1000 ft) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.

** Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

*** Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

(*c*) The PIC shall observe the following cruising levels in other areas not specified in item (*a*) above.

TRACK**											
From 000 Degrees to 179 Degrees***						From 180 Degrees to 359 Degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
	Altitude			Altitude			Altitude			Altitude	
FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet	FL	Meters	Feet
-90	—	—	—	—	—	0	—	—	—	—	—
10	300	1000	—	—	—	20	600	2000	—	—	—
30	900	3000	35	1050	3500	40	1200	4000	45	1350	4500
50	1500	5000	55	1700	5500	60	1850	6000	65	2000	6500
70	2150	7000	75	2300	7500	50	2450	8000	85	2600	8500
90	2750	9000	95	2900	9500	100	3050	10000	105	3200	10500
110	3350	11000	115	3500	11500	120	3650	12000	125	3800	12500
130	3950	13000	135	4100	13500	140	4250	14000	145	4400	14500
150	4550	15000	155	4700	15500	160	4900	16000	165	5050	16500
170	5200	17000	175	5300	17500	180	5500	18000	185	5650	18500
190	5800	19000	195	950	19500	200	6100	20000	205	6250	20500
210	6400	21000	215	6550	21500	220	6700	22000	225	6850	22500
230	7000	23000	235	7150	23500	240	7300	24000	245	7450	24500
250	7600	25000	255	7750	25500	260	7900	26000	265	8100	26500
270	8250	27000	275	8100	27500	280	8550	28000	285	8700	28500
290	8850	29000	300	9150	30000	310	9450	31000	320	9750	32000
330	10050	33000	340	10350	34000	350	10650	35000	360	10950	36000
370	11300	37000	380	11600	38000	390	11900	39000	400	12200	40000
410	12500	41000	420	12500	42000	430	13100	43000	440	13400	44000
450	13700	45000	460	14000	46000	470	14350	47000	480	14650	48000
490	14950	49000	500	15250	50000	510	15550	51000	520	15850	52000
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

**Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

***.Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

Note 1 : ICAO Doc 9574, Manual on the Implementation of a 300 m (1000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive, contains guidance material relating to vertical separation.

Note 2 : ICAO Doc 8168, Procedures for Air Navigation Services, contains guidance for the system of flight levels.

IS : 8.10.1.9.—(*a*) Each AOC holder shall ensure that all operations personnel are provided company indoctrination training that covers the following areas :

Company Procedures Indoctrination.

(1) AOC holder's organisation, scope of operation, and administrative practices as applicable to their assignments and duties.

(2) Appropriate provisions of these regulations and other applicable regulations and guidance materials.

(3) Contents of the AOC holder's certificate and operations specifications (not required for cabin crew).

(4) AOC holder policies and procedures.

(5) Crew member and flight operations officer duties and responsibilities.

(6) AOC holder testing programme for alcohol and narcotic psychoactive substances.

(7) Applicable crew member manuals.

(8) Appropriate portions of the AOC holder's Operations Manual.

IS : 8.10.1.10.—(*a*) Each AOC holder shall establish, maintain, and have approved by the Authority, staff training programmes, as required by the Technical Instructions.

Initial Dangerous Goods Training.

(*b*) Each AOC holder not holding a permanent approval to carry dangerous goods shall ensure that-

(1) Staff who are engaged in general cargo handling have received training to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column I of Table I to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how to identify such goods.

(2) Crew members, passenger handling staff, and security staff employed by the AOC holder who deal with the screening of a passengers and their baggage, have received training which covers as a minimum, the areas identified in Column 2 of Table I to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.

Table 1

Areas of Dangerous Goods Training	1	2
General Philosophy	x	x
Limitations on Dangerous Goods in Air Transport	x	x
Package Marking and Labelling	x	x
Dangerous Goods in Passengers Baggage		x
Emergency Procedures		x

Note : "*x*" indicates an area to be covered.

(*c*) Each AOC holder holding a permanent approval to carry dangerous goods shall ensure that :

(1) Staff who are engaged in the acceptance of dangerous goods have received training and are qualified to carry out their duties which covers as a minimum, the areas identified in Column I of Table 2 to a depth sufficient to ensure the staff can take decisions on the acceptance or refusal of dangerous goods offered for carriage by air.

(2) Staff who are engaged in ground handling, storage and loading of dangerous goods have received training to enable them to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column 2 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them.

(3) Staff who are engaged in general cargo handling have received training to enable them to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column 3 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them.

(4) Flight crew members have received training which covers as a minimum, the areas identified in Column 4 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how they should be carried on an aircraft.

(5) Passenger handling staff ; security staff employed by the operator who deal with the screening of passengers and their baggage; and crew members other than flight crew members, have received training which covers as a minimum, the areas identified in Column 5 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and what requirements apply to the carriage of such goods by passengers or, more generally, their carriage on an aircraft.

(*d*) Each AOC holder shall ensure that all staff who requires dangerous goods training receives recurrent training at intervals of not longer than 2 years.

(*e*) Each AOC holder shall ensure that records of dangerous goods training are maintained for all staff trained in accordance with paragraph (*d*).

(*f*) Each AOC holder shall ensure that its handling agent's staff are trained in accordance with the applicable column of Table 1 or Table 2

Table 2

Areas of Training	1	2	3	4	5
General Philosophy	x	x	x	x	x
Limitations on Dangerous Goods in the Air Transport	x	x	x	x	x
Classification and List of Dangerous Goods	x	x		x	
General Packing Requirements and Packing Instructions	x				
Packaging Specifications Marking	x				
Package Marking and Labelling	x	x	x	x	x
Documentation from the Shipper	x				
Acceptance of Dangerous Good, Including the Use of a Checklist	x				
Loading, Restrictions on Loading and Segregation	x	x	x	x	
Inspections for Damage or Leakage and Decontamination Procedures	x	x			
Provision of Information to Commander	x	x		x	
Dangerous Goods in Passengers' Baggage	x			x	x
Emergency Procedures	x	x		x	x

Note : “*x*” indicates an area to be covered.

(*g*) An AOC holder shall provide dangerous goods training manuals which contain adequate procedures and information to assist personnel in identifying packages marked or labelled as containing hazardous materials including—

(1) Instructions on the acceptance, handling, and carriage of hazardous materials.

(2) Instructions governing the determination of proper shipping names and hazard classes.

(3) Packaging, labelling, and marking requirements.

(4) Requirements for shipping papers, compatibility requirements, loading, storage, and handling requirements.

(5) Restrictions.

Initial Crew Resource Management Training.

IS : 8.10.1.12.—(*a*) Each AOC holder shall ensure that the flight operations officers and all aircraft crew members have CRM training as part of their initial and recurrent training requirements.

(1) A CRM training programme shall include—

(2) An initial indoctrination/awareness segment ;

(3) A method to provide recurrent practice and feedback ; and

(*b*) A method of providing continuing reinforcement.

(1) Curriculum topics to be contained in an initial CRM training course include—

(2) Communications processes and decision behaviour.

(3) Internal and external influences on interpersonal communications.

(4) Barriers to communication.

(5) Listening skills.

(6) Decision-making skills.

(7) Effective briefings.

(8) Developing open communications.

(9) Inquiry, advocacy, and assertion training.

(10) Crew self-critique.

(11) Conflict resolution.

(12) Team building and maintenance.

(13) Leadership and followship training.

(14) Interpersonal relationships.

(15) Workload management.

(16) Situational awareness.

(17) How to prepare, plan and monitor task completions.

(18) Workload distribution.

(19) Distraction avoidance.

(20) Individual factors.

(21) Stress reduction.

Initial Emergency Equipment Drills

IS : 8.10.1.13.—(*a*) Each aircraft crew member shall accomplish emergency training during the specified training periods, using those items of installed emergency equipment for each type of aircraft in which he or she is to serve.

(*b*) During initial training, each aircraft crew member shall perform the following one-time emergency drills—

(1) Protective Breathing Equipment (PBE)/Firefighting Drill.

(*i*) Locate source of fire or smoke (actual or simulated fire).

(*ii*) Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about fire situation.

(*iii*) Don and activate installed PBE or approved PBE simulation device.

(*iv*) Manoeuvre in limited space with reduced visibility.

(*v*) Effectively use the aircraft's communication system.

(*vi*) Identify class of fire.

(*vii*) Select the appropriate extinguisher.

(*viii*) Properly remove extinguisher from securing device.

(*ix*) Prepare, operate and discharge extinguisher properly.

(*x*) Utilise correct firefighting techniques for type of fire.

(2) Emergency Evacuation Drill.

(*i*) Recognise and evaluate an emergency.

(*ii*) Assume appropriate protective position.

(*iii*) Command passengers to assume protective position.

(*iv*) Implement crew co-ordination procedures.

(*v*) Ensure activation of emergency lights.

(*vi*) Assess aircraft conditions.

(*vii*) Initiate evacuation (dependent on signal or decision).

(*viii*) Command passengers to release seatbelts and evacuate.

(*ix*) Assess exit and redirect, if necessary; to open exit, including deploying slides and commanding helpers to assist.

(*x*) Command passengers to evacuate at exit and run away from aircraft.

(*xi*) Assist special need passengers, such as handicapped, elderly, and persons in a state of panic.

(*xii*) Actually exit aircraft or training device using at least one of the installed emergency evacuation slides.

Note : The crew member may either observe the aeroplane exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(*c*) Each aircraft crew member shall accomplish additional emergency drills during initial and recurrent training, including actual performance of the following emergency drills—

(1) Emergency Exit Drill.

(*i*) Correctly preflight each type of emergency exit and evacuation slide or slideraft (if part of cabin crew member's assigned duties).

(*ii*) Disarm and open each type of door exit in normal mode.

(*iii*) Close each type of door exit in normal mode.

(*iv*) Arm each type of door exit in emergency mode.

(*v*) Open each type of door exit in emergency mode.

(*vi*) Use manual slide inflation system to accomplish or ensure slide or slideraft inflation.

(*vii*) Open each type of window exit.

(*viii*) Remove eSCCMpe rope and position for use.

(2) Hand Fire Extinguisher Drill.

(*i*) Preflight each type of hand fire extinguisher.

(*ii*) Locate source of fire or smoke and identify class of fire.

(*iii*) Select appropriate extinguisher and remove from securing device.

(*iv*) Prepare extinguisher for use.

(*v*) Actually operate and discharge each type of installed hand fire extinguisher.

Note 1 : Fighting an actual or a simulated fire is not necessary during this drill.

Note 2 : The discharge of Halon extinguishing agents during firefighting drills in not appropriate, unless a training facility is used that is specifically designed to prevent harm to the environment from the discharged Halon. When such facilities are not used, other fire extinguishing agents that are not damaging to the environment should be used during the drills.

(*vi*) Utilise correct firefighting techniques for type of fire.

(*vii*) Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about the type of fire situation.

(3) Emergency Oxygen System Drill.

(*i*) Preflight and operation of portable oxygen devices.

(*ii*) Actually operate portable oxygen bottles, including masks and tubing.

(*iii*) Verbally demonstrate operation of chemical oxygen generators or installed oxygen supply system.

(*iv*) Prepare for use and operate oxygen device properly, including donning and activation.

(*v*) Administer oxygen to self, passengers, and to those persons with special oxygen needs.

(*vi*) Utilise proper procedures for effective crew co-ordination and communication.

(*vii*) Manually open each type of oxygen mask compartment and deploy oxygen masks.

(*viii*) Identify compartments with extra oxygen masks.

(*ix*) Implement immediate action decompression procedures.

(*x*) Reset oxygen system, if applicable.

(*xi*) Preflight and operation of PBE.

(*xii*) Activate PBE.

Note : Several operators equip their aircraft with approved PBE units that have approved storage pouches fastened with two metal staples at one end. However, considerations of practicality and cost compel operators to use a less durable storage pouch that lacks the staple fasteners for training purposes. As a result, pilots and cabin crew members have been surprised that opening the pouch furnished on board requires more force than opening the training pouch. The Authority should require crew member training that includes the appropriate procedures for operating PBE. In those cases where pouches with staples are used for storage of the PBE unit, special emphasis in training should highlight the difference between the training pouch and the onboard pouch. The training pouch may be easy to open, but the approved, onboard pouch may require as much as 28 pounds of force to overcome the 2 staple fasteners.

(4) Flotation Device Drill.

(*i*) Preflight flotation device, if appropriate.

(*ii*) Don and inflate life vests.

(*iii*) Remove and use flotation seat cushions, as installed.

(*iv*) Demonstrate swimming techniques using a seat cushion, as installed.

(5) Ditching Drill, if applicable.

Note : During a ditching drill students shall perform the "prior to impact" and "*after impact*" procedures for a ditching, as appropriate to the specific operator's type of operation.

(*i*) Implement crew co-ordination procedures, including briefing with captain to obtain pertinent ditching information and briefing cabin crew members.

(*ii*) Co-ordinate time frame for cabin and passenger preparation.

(*iii*) Adequately brief passengers on ditching procedures.

(*iv*) Ensure cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys.

(*v*) Demonstrate how to properly deploy and inflate slideraft.

(*vi*) Demonstrate how to properly deploy and inflate liferafts, if applicable.

(*vii*) Remove, position and attach sliderafts to aircraft.

(*viii*) Inflate rafts.

(*ix*) Use eSCCMpe ropes at overwing exits.

(*x*) Command helpers to assist.

(*xi*) Use slides and life vests or seat cushions as flotation devices.

(*xii*) Remove appropriate emergency equipment from aircraft.

(*xiii*) Board rafts properly.

(*xiv*) Initiate raft management procedures (i.e., disconnecting rafts from aircraft, applying immediate first aid, rescuing persons in water, salvaging floating rations and equipment, deploying sea anchor, tying rafts together, activating or ensuring operation of emergency locator transmitter).

(*xv*) Initiate basic survival procedures (i.e., removing and utilising survival kit items, repairing and maintaining raft, ensuring protection from exposure, erecting canopy, communicating location, providing continued first aid, providing sustenance).

(*xvi*) Use heaving line to rescue persons in water.

(*xvii*) Tie sliderafts or rafts together.

(*xviii*) Use life line on edge of slideraft or life raft as a handhold.

(*xix*) Secure survival kit items.

(*d*) Each aircraft crew member shall accomplish additional emergency drill requirements during initial and recurrent training including observing the following emergency drills—

(1) Liferaft Removal and Inflation Drill, if applicable.

(*i*) Removal of a liferaft from the aircraft or training device.

(*ii*) Inflation of a liferaft.

(2) Slideraft Transfer Drill.

(*i*) Transfer of each type of slideraft pack from an unusable door to a usable door.

(*ii*) Disconnect slideraft at unusable door.

(*iii*) Redirect passengers to usable slideraft.

(*iv*) Installation and deployment of slideraft at usable door.

(3) Slide and Slideraft Deployment, Inflation, and Detachment Drill.

(*i*) Engage slide girt bar in floor brackets, if applicable.

(*ii*) Arm slide for automatic inflation.

(*iii*) Inflate slides with and without quick-release handle (manually and automatically).

(*iv*) Disconnecting slide from the aircraft for use as a flotation device.

(*v*) Arm sliderafts for automatic inflation.

(*vi*) Disconnecting slideraft from the aircraft.

(4) Emergency Evacuation Slide Drill :

(*i*) Open armed exit with slide or slideraft deployment and inflation.

(*ii*) Egress from aircraft via the evacuation slide and run away to a safe distance.

Initial Aircraft Ground Training-flight Crew.

IS : 8.10.1.14(*B*)—(*a*) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown. Instructions shall include at least the following general subjects :

(1) AOC holder's dispatch, flight release, or flight locating procedures.

(2) Principles and methods for determining mass and balance, and runway limitations for takeoff.

(3) AOC holder's operations specifications, authorisations and limitations.

(4) Adverse weather recognition and avoidance, and flight procedures which shall be followed when operating in the following conditions :

(*i*) Icing.

(*ii*) Fog.

(*iii*) Turbulence.

(*iv*) Heavy precipitation.

(*v*) Thunderstorms.

(*vi*) Low-level windshear and microburst.

(*vii*) Low visibility.

(*viii*) Contaminated runways.

(*ix*) West African meteorology

(5) Normal and emergency communications procedures and navigation equipment including the AOC holder's communications procedures and ATC clearance requirements.

(6) Navigation procedures used in area departure, en route, area arrival, approach and landing phases, to include visual cues prior to and during descent below DH or MDA.

(7) Approved crew resource management training.

(8) Air traffic control systems, procedures, and phraseology.

(9) Aircraft performance characteristics during all flight regimes, including :

(*i*) The use of charts, tables, tabulated data and other related manual information.

(*ii*) Normal, abnormal, and emergency performance problems.

(*iii*) Meteorological and mass limiting performance factors (such as temperature, pressure, contaminated runways, precipitation, climb/runway limits).

(*iv*) Inoperative equipment performance limiting factors (such as MEL/CDL, inoperative antiskid).

(*v*) Special operational conditions (such as unpaved runways, high altitude aerodromes and drift down requirements).

(10) Normal, abnormal and emergency procedures on the aircraft type to be used.

(*b*) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems (if applicable) :

(1) Airframe.

(*i*) Aircraft

(*ii*) Aircraft dimensions, turning radius, panel layouts, cockpit and cabin configurations.

(*iii*) Other major systems and components or appliances of the aircraft.

(*iv*) Operating limitations.

(*v*) Approved aircraft flight manual.

(2) Powerplants.

(*i*) Basic engine description.

(*ii*) Engine thrust ratings.

(*iii*) Engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

(3) Electrical.

(*i*) Sources of aircraft electrical power (such as engine driven generators, APU generator, external power, etc.).

(*ii*) Electrical buses.

(*iii*) Circuit breakers.

(*iv*) Aircraft battery.

(*v*) Standby power systems.

(4) Hydraulic.

(*i*) Hydraulic reservoirs, pumps, accumulators; filters, check valves, interconnects and actuators.

(*ii*) Other hydraulically operated components.

(5) Fuel.

(*i*) Fuel tanks (location and quantities).

(*ii*) Engine driven pumps.

(*iii*) Boost pumps.

(*iv*) System valves and crossfeeds.

(*v*) Quantity indicators.

(*vi*) Provisions for fuel jettisoning.

(6) Pneumatic.

(*i*) Bleed air sources (APU, engine or external ground air).

(*ii*) Means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices.

(7) Air conditioning and pressurisation.

(*i*) Heaters, air conditioning packs, fans, and other environmental control devices.

(*ii*) Pressurisation system components such as outflow and negative pressure relief valves.

(*iii*) Automatic, standby, and manual pressurisation controls and annunciators.

(8) Flight controls.

(*i*) Primary controls (yaw, pitch, and roll devices).

(*ii*) Secondary controls (leading/trailing edge devices, flaps, trim, and damping mechanisms).

(*iii*) Means of actuation (direct/indirect or fly by wire).

(*iv*) Redundancy devices.

(9) Landing gear and brakes.

(*i*) Landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, if applicable.

(*ii*) Steering (nose or body steering gear).

(*iii*) Bogie arrangements.

(*iv*) Air/ground sensor relays.

(*v*) Visual downlock indicators.

(10) Ice and rain protection.

(*i*) Rain removal systems.

(*ii*) Anti-icing and/or deicing system(s) affecting flight controls, engines, pitot static and other probes, fluid outlets, cockpit windows, and aircraft structures.

(11) Equipment and furnishings.

(*i*) Exits.

(*ii*) Galleys.

(*iii*) Water and waste systems.

(*iv*) Lavatories.

(*v*) Cargo areas.

(*vi*) Crew member and passenger seats.

(*vii*) Bulkheads.

(*viii*) Seating and/or cargo configurations.

(*ix*) Non-emergency equipment and furnishings.

(12) Navigation equipment.

(*i*) Flight directors.

(*ii*) Horizontal situation indicator.

(*iii*) Radio magnetic indicator.

(*iv*) Navigation receivers (GPS, ADF, SDF/LDA, VOR, TACAN,LORAN-C, RNAV, Marker Beacon, DME)as required for the flight operations to be conducted.

(*v*) Inertial systems (INS, IRS).

(*vi*) Functional displays.

(*vii*) Fault indications and comparator systems.

(*viii*) Aircraft transponders.

(*ix*) Radio altimeters.

(*x*) Weather radar.

(*xi*) Cathode ray tube or computer generated displays of aircraft position and navigation information.

(13) Auto flight system.

(*i*) Autopilot.

(*ii*) Autothrottles.

(*iii*) Flight director and navigation systems.

(*iv*) Automatic approach tracking.

(*v*) Autoland.

(*vi*) Automatic fuel and performance management systems.

(14) Flight instruments.

(*i*) Panel arrangement.

(*ii*) Flight instruments (attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments).

(*iii*) Instrument power sources, and instrument sensory sources (e.g., pitot static pressure).

(15) Display systems.

(*i*) Weather radar.

(*ii*) Other cathode ray tube (CRT) or computer generated displays (e.g., checklist, vertical navigation or longitudinal navigation displays).

(16) Communication equipment.

(*i*) VHF/HF/SAT COM radios.

(*ii*) Audio panels.

(*iii*) Inflight interphone and passenger address systems.

(*iv*) Voice recorder.

(*v*) Air/ground passive communications systems (ACARS).

(17) Warning systems.

(*i*) Aural, visual, and tactile warning systems (including the character and degree of urgency related to each signal).

(*ii*) Warning and caution annunciator systems (including airborne collision avoidance, ground proximity and takeoff configuration warning systems).

(18) Fire protection.

(*i*) Fire and overheat sensors, loops, modules, or other means of providing visual and/or aural indications of fire or overheat detection.

(*ii*) Procedures for the use of fire handles, automatic extinguishing systems and extinguishing agents.

(*iii*) Power sources necessary to provide protection for fire and overheat conditions in engines, APU, cargo bay/wheel well, cockpit, cabin and lavatories.

(19) Oxygen.

(*i*) Passenger, crew, and portable oxygen supply systems.

(*ii*) Sources of oxygen (gaseous or solid).

(*iii*) Flow and distribution networks.

(iv) Automatic deployment systems.

(*v*) Regulators, pressure levels and gauges.

(*vi*) Servicing requirements.

(20) Lighting.

(*i*) Cockpit, cabin, and external lighting systems.

(*ii*) Power sources.

(*iii*) Switch positions.

(*iv*) Spare light bulb locations.

(21) Emergency equipment.

(*i*) Fire and oxygen bottles.

(*ii*) First aid and medical kits.

(*iii*) Liferafts and life preservers.

(*iv*) Crash axes.

(*v*) Emergency exits and lights.

(*vi*) Slides and sliderafts.

(*vii*) ESCCMpe straps or handles.

(*viii*) Hatches, ladders and movable stairs.

(22) Auxiliary Power Unit (APU).

(*i*) Electric and bleed air capabilities.

(*ii*) Interfaces with electrical and pneumatic systems.

(*iii*) Inlet doors and exhaust ducts.

(*iv*) Fuel supply.

(23) Performance.

(*c*) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems integration items :

(1) Use of checklist.

(*i*) Safety checks.

(*ii*) Cockpit preparation (switch position and checklist flows).

(*iii*) Checklist callouts and responses.

(*iv*) Checklist sequence.

(2) Flight planning.

(*i*) Preflight and in-flight planning.

(*ii*) Performance limitations (meteorological, mass, and MEL/CDL items).

(*iii*) Required fuel loads.

(*iv*) Weather planning (lower than standard takeoff minimums or alternate requirements).

(3) Display systems.

(*i*) Weather radar.

(*ii*) CRT displays (checklists, vertical navigation or longitudinal navigation displays).

(4) Navigation and Communications systems.

(*i*) Preflight and operation of applicable receivers.

(*ii*) Onboard navigation systems.

(*iii*) Flight plan information input and retrieval.

(5) Autoflight/flight directors.

(*i*) Autopilot.

(*ii*) Autothrust.

(*iii*) Flight director systems, including the appropriate procedures, normal and abnormal indications, and annunciators.

(6) Cockpit familiarisation.

(*i*) Activation of aircraft system controls and switches to include normal, abnormal and emergency switches.

(*ii*) Control positions and relevant annunciators, lights, or other caution and warning systems.

(*d*) Each AOC holder shall ensue that initial ground training for flight crew consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) For pilots and flight engineers—

(*i*) Piston-engined aeroplane-64 hours.

(*ii*) Turbropropeller-powered aeroplane-80 hours.

(*iii*) Turbo-jet aeroplane-120 hours.

(*iv*) Helicopter-64 hours.

(*v*) Powered-lift-80 hours.

(*vi*) Other aircraft-64 hours.

(2) For flight navigators-

(*i*) Piston-engined aircraft-16 hours.

(*ii*) Turbropropeller-powered aircraft-32 hours.

(*iii*) Turbojet-aircraft-32 hours.

Initial Aircraft Ground Training-cabin Crew Members.

IS : 8.10.1.14(*C*)—(*a*) Each AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following general subjects, if applicable :

(1) Aircraft familiarisation.

(*i*) Aircraft characteristics and description.

(*ii*) Flightdeck configuration.

(*iii*) Cabin configuration.

(*iv*) Galleys.

(*v*) Lavatories.

(*vi*) Stowage areas.

(2) Aircraft equipment and furnishings.

(*i*) Cabin crew member stations.

(*ii*) Cabin crew member panels.

(*iii*) Passenger seats.

(*iv*) Passenger service units and convenience panels.

(*v*) Passenger information signs.

(*vi*) Aircraft markings.

(*vii*) Aircraft placards.

(*viii*) Bassinets and bayonet tables.

(3) Aircraft systems.

(*i*) Air conditioning and pressurisation system.

(*ii*) Aircraft communication systems (call, interphone and passenger address).

(*iii*) Lighting and electrical systems.

(*iv*) Oxygen systems (flight crew, observer and passenger).

(*v*) Water system.

(*vi*) Entertainment and convenience systems.

(4) Aircraft exits.

(*i*) General information.

(*ii*) Exits with slides or sliderafts (preflight and normal operation).

(*iii*) Exits without slides (preflight and normal operations).

(*iv*) Window exits (preflight).

(5) Crew member communication and co-ordination.

(*i*) Authority of PIC.

(*ii*) Routine communication signals and procedures.

(*iii*) Crew member briefing.

(6) Routine crew member duties and procedures.

(*i*) Crew member general responsibilities.

(*ii*) Reporting duties and procedures for specific aircraft.

(*iii*) Pre-departure duties and procedures prior to passenger boarding.

(*iv*) Passenger boarding duties and procedures.

(*v*) Prior to movement on the surface duties and procedures.

(*vi*) Prior to takeoff duties and procedures applicable to specific aircraft.

(*vii*) Inflight duties and procedures.

(*viii*) Prior to landing duties and procedures.

(*ix*) Movement on the surface and arrival duties and procedures.

(*x*) After arrival duties and procedures.

(*xi*) Intermediate stops.

(7) Passenger handling responsibilities.

(*i*) Crew member general responsibilities.

(*ii*) Infants, children, and unaccompanied minors.

(*iii*) Passengers needing special assistance.

(*iv*) Passengers needing special accommodation.

(*v*) Carry-on stowage requirements.

(*vi*) Passenger seating requirements.

(*vii*) Smoking and no smoking requirements.

(8) Approved Crew Resource Management (CRM) training for cabin crew members.

(*b*) Each AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following aircraft specific emergency subjects, if applicable :

(1) Emergency equipment.

(*i*) Emergency communication and notification systems.

(*ii*) Aircraft exits.

(*iii*) Exits with slides or sliderafts (emergency operation).

(*iv*) Slides and sliderafts in a ditching.

(*v*) Exits without slides (emergency operation).

(*vi*) Window exits (emergency operation).

(*vii*) Exits with tailcones (emergency operation).

(*viii*) Cockpit exits (emergency operation).

(*ix*) Ground evacuation and ditching equipment.

(*x*) First aid equipment.

(*xi*) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE).

(*xii*) Firefighting equipment.

(*xiii*) Emergency lighting systems.

(*xiv*) Universal precaution kits

(*xv*) Automated external defibrillators

(*xvi*) Additional emergency equipment.

(2) Emergency assignments and procedures.

(*i*) General types of emergencies specific to aircraft, including crew coordination and communication.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (i.e., passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Hijacking and acts of unlawful interference.

(*xii*) Bomb threat.

(*xiii*) Turbulence.

(*xiv*) Other unusual situations including an awareness of other crew members' assignments and functions as they pertain to the cabin crew member's own duties.

(*xv*) Previous aircraft accidents and incidents.

(3) Aircraft specific emergency drills.

(*i*) Emergency exit drill.

(*ii*) Hand fire extinguisher drill.

(*iii*) Emergency oxygen system drill.

(*iv*) Flotation device drill.

(*v*) Ditching drill, if applicable.

(*vi*) Liferaft removal and inflation drill, if applicable.

(*vii*) Slideraft pack transfer drill, if applicable.

(*viii*) Slide or slideraft deployment, inflation, and detachment drill, if applicable.

(*ix*) Emergency evacuation slide drill, if applicable.

(*c*) Each AOC holder shall ensure that initial ground training for a cabin crew member includes a competency check given by the appropriate supervisor or ground instructor to determine his or her ability to perform assigned duties and responsibilities.

(*d*) Each AOC holder shall ensure that initial ground training for cabin crew members consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) Piston-engined-8 hours.

(2) Turbopropeller-powered-8 hours.

(3) Turbo-jet-16 hours.

(4) Other aircraft, including, if applicable, helicopter and powered lift-8 hours.

Initial Aircraft Ground Training-flight Operations Officer

IS : 8.10.1.14(*D*)—(*a*) Each AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following subjects :

(1) General dispatch subjects :

(*i*) Appropriate regulations.

(*ii*) Operations Manual of the AOC holder.

(*iii*) Operations specifications of the AOC holder.

(*iv*) Weather reports: interpretation, available sources, actual and prognostic, seasonal variations.

(*v*) Communications, to include normal and emergency.

(*vi*) Meteorology including West African meteorology, to include effects on radio reception.

(*vii*) Adverse weather.

(*viii*) Notices to airmen.

(*ix*) Navigational charts and publications.

(*x*) Joint dispatcher/pilot responsibilities.

(*xi*) ATC co-ordination procedures.

(*xii*) Familiarisation with operations area, including classes of airspace and special areas of navigation.

(*xiii*) Characteristics of special aerodromes.

(2) Aircraft characteristics :

(*i*) Aircraft specific flight preparation.

(*ii*) Aircraft operating and performance characteristics.

(*iii*) Navigation equipment, including peculiarities and limitations.

(*iv*) Instrument approach and communication equipment.

(*v*) Emergency equipment.

(*vi*) AFM or RFM provisions applicable to the aircraft duties.

(*vii*) MEL/CDL.

(*viii*) Applicable equipment training.

(3) Operations procedures:

(*i*) Adverse weather phenomena (wind-shear, clear air turbulence and thunderstorms).

(*ii*) Mass and balance computations and load control procedures.

(*iii*) Aircraft performance computations, to include takeoff weight limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations.

(*iv*) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis.

(*v*) Dispatch release preparation.

(*vi*) Crew briefings.

(*vii*) Flight monitoring procedures.

(*viii*) MEL and CDL procedures.

(*ix*) Manual performance of all required procedures in case of the loss of automated capabilities.

(*x*) Training in appropriate geographic areas.

(*xi*) ATC and instrument procedures, ground hold and central flow control procedures.

(*xii*) Radio/telephone procedures.

(4) Abnormal and emergency procedures.

(*i*) Assisting flight crew in an emergency.

(*ii*) Alerting of appropriate governmental, company and private agencies.

(5) Crew resource management.

Note : IS 8.10.1.12 contains CRM training items.

(6) Dangerous goods.

Note : IS 8.10.1.10 contains dangerous goods training items.

(7) Security.

Note : ICAO Doc 9811, Manual on the Implementation of the Security Provisions of *Annex* 6, Chapter 3, provides additional guidance.

(8) Differences training.

Note : IS 8.10.1.17 contains items on differences training.

(*b*) Each AOC holder shall ensure that initial ground training for flight operations officers includes a competency check given by an appropriately qualified dispatch supervisor or ground instructor that demonstrates the required knowledge and abilities.

(*c*) Each AOC holder shall ensure that initial ground training for flight operations officers consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) Piston-engined aircraft-30 hours.

(2) Turbropropeller-powered aircraft-40 hours.

(3) Turbo-jet aircraft-40 hours.

Initial Aircraft Flight Training

IS : 8.10.1.15.—(*a*) Each AOC holder shall ensure that pilot initial flight training includes at least the following training and practice in procedures related to the carrying out of pilot duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as appropriate to the category and class of aircraft, and as approved by the Authority.

Note : The flight training events for pilots listed in this IS are generic in nature for a type-rated aeroplane training curriculum conducted in a FSTD. All of the events may not apply to all aircraft (eg: one engine inoperative landing for mutli-engine versus single engine aeroplanes) or may differ in the requirements for a similar event (*eg* : taxi for aeroplane, helicopter, and seaplane).Additional training events may need to be added, changed or deleted for aircraft based on aircraft category or class.

(1) Preparation.

(*i*) Aircraft pre-flight done by external walk around, unless the use of pictorial display is authorised by the Authority.

(*ii*) Pre-taxi procedures

(*iii*) Performance limitations.

(*iv*) Surface operation.

(*v*) Pushback.

(*vi*) Powerback taxi, if applicable to the type of operation to be conducted.

(*vii*) Starting.

(*viii*) Taxi

(*ix*) Pre-take-off checks.

(2) Take-off.

(*i*) Normal.

(*ii*) Crosswind.

(*iii*) Rejected.

(*iv*) Power failure after V1.

(*v*) Lower than standard minimum, if applicable to the type of operation to be conducted.

(3) Climb.

(*i*) Normal.

(*ii*) One-engine inoperative during climb to en route altitude.

(4) En route.

(*i*) Steep turns.

(*ii*) Approaches to stalls (take-off, en route, and landing configurations).

(*iii*) Inflight powerplant shutdown.

(*iv*) Inflight powerplant restart.

(*v*) High speed handling characteristics.

(5) Descent.

(*i*) Normal.

(*ii*) Maximum rate.

(6) Approaches.

(*i*) VFR procedures.

(*ii*) Visual approach with 50% loss of power of available powerplants.

(*iii*) Visual approach with slat/flap malfunction.

(*iv*) IFR precision approaches (ILS normal and ILS with one-engine inoperative).

(*v*) IFR non-precision approaches (NDB normal and VOR normal).

Note : Non-precision approach with one engine inoperative may include LOC backcourse procedures, SDF/LDA, GPS, TACAN and circling approach procedures, as applicable to the operator's authorisations.

(*vi*) *Note* : Simulator shall be qualified for training/checking on the circling manoeuvre.

(*vii*) Missed approach from precision approach.

(*viii*) Missed approach from non-precision approach.

(*ix*) Missed approach with powerplant failure.

(7) Landings.

(i) Normal with a pitch mistrim (small aircraft only).

(*ii*) Normal from precision instrument approach.

(*iii*) Normal from precision instrument approach with most critical engine inoperative.

(*iv*) Normal with 50% loss of power of available powerplants.

(*v*) Normal with flap/slat malfunction.

(*vi*) Rejected landings.

(*vii*) Crosswind.

(*viii*) Manual reversion/degraded control augmentation.

(*ix*) Short/soft field (small aircraft only).

(*x*) Glassy/rough water (seaplanes only).

(*xi*) Auto-rotation (helicopter only)

(8) After landing.

(*i*) Parking.

(*ii*) Emergency evacuation.

(*iii*) Docking, mooring, and ramping (seaplanes only).

(9) Other flight procedures during any airborne phase.

(*i*) Airborne Collision Avoidance System: use and avoidance maneuvers

(*ii*) Holding.

(*iii*) Ice accumulation on airframe.

(*iv*) Air hazard avoidance.

(*v*) Windshear/mircoburst.

(10) Normal, abnormal and alternate systems procedures during any phase.

(*i*) Pneumatic/pressurisation.

(*ii*) Air conditioning.

(*iii*) Fuel and oil.

(*iv*) Electrical.

(*v*) Hydraulic.

(*vi*) Flight controls.

(*vii*) Anti-icing and deicing systems.

(*viii*) Autopilot.

(*ix*) Flight management guidance systems and/or automatic or other approach and landing aids.

(*x*) Stall warning devices, stall avoidance devices, and stability augmentation systems.

(*xi*) Airborne weather radar.

(*xii*) Flight instrument system malfunction.

(*xiii*) Communications equipment.

(*xiv*) Navigation systems.

(11) Emergency systems procedures during any phase.

(*i*) Aircraft fires.

(*ii*) Smoke control.

(*iii*) Powerplant malfunctions.

(*iv*) Fuel jettison.

(*v*) Electrical, hydraulic, pneumatic systems.

(*vi*) Flight control system malfunction.

(*vii*) Landing gear and flap system malfunction.

(*b*) Each AOC holder shall ensure that flight engineer flight training includes at least the following training and practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as approved by the Authority.

Note : The flight training events for flight engineers listed in this IS are generic in nature for a type-rated aeroplane training curriculum. Additional training events may need to be added, changed or deleted. The events listed are typically conducted in a FSTD, except as noted, and may be conducted in aircraft when appropriate

(1) Preparation.

(*i*) Airplane preflight.

(*ii*) Logbook procedures.

(*iii*) Safety checks.

(*iv*) Cabin/interiors.

(*v*) Exterior Walkaround.

(*vi*) Servicing/deicing.

(*vii*) Use of Oxygen.

(2) Ground Operations.

(*i*) Performance Data.

(*a*) TO/LND Data.

(*b*) Airport Analysis.

(*c*) Mass and Balance.

(*ii*) Use of Checklist.

(*a*) Panel setup.

(*iii*) Starting.

(*a*) External power.

(*b*) External Air.

(*c*) APU.

(*iv*) Communications.

(*a*) Station Procedures.

(*b*) ACARS.

(*v*) Taxi.

(3) Takeoff.

(*i*) Powerplant Control.

(*ii*) Flaps/landing gear.

(*iii*) Fuel management.

(*iv*) Other Systems Operation.

(*v*) Aircraft Performance.

(*vi*) Checklist Completion.

(4) Climb.

(*i*) Powerplant control.

(*ii*) Fuel Management.

(*iii*) Pressurisation.

(*iv*) Electrical System.

(*v*) Air Conditioning.

(*vi*) Flight Controls.

(*vii*) Other Systems.

(5) En Route.

(*i*) Powerplant Operation.

(*ii*) Fuel Management.

(*iii*) Performance Management.

(*iv*) High Altitude Performance.

(*v*) Other Systems Operation.

(6) Descent.

(*i*) Powerplant operation.

(*ii*) Other Systems Operation.

(*iii*) Performance Management.

(7) Approach.

(*i*) Landing Data.

(*ii*) Landing Gear Operation.

(*iii*) Flat/Slat/Spoiler Operation.

(*iv*) Approach Monitoring.

(8) Landings.

(*i*) Powerplant Operation.

(*ii*) Aircraft Configuration.

(*iii*) System Operation.

(*a*) Emergency Evacuation.

(9) Procedures During Any Ground or Airborne Phase.

(*i*) Cockpit Equipment.

(*ii*) Flap Slats/Gear.

(*iii*) Powerplant.

(*iv*) Pressurisation.

(*v*) Pneumatic.

(*vi*) Air-Conditioning.

(*vii*) Fuel and Oil.

(*viii*) Electrical.

(*ix*) Hydraulic.

(*x*) Flight Controls.

(*xi*) Anti-Icing and Deicing.

(*xii*) Other Checklist Procedures.

(*c*) Each AOC holder shall ensure that flight navigator training includes at least the following training and practice in procedures related to the carrying out of flight navigator duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as approved by the Authority.

(1) Initial flight training for flight navigators must include flight training and a flight check that is adequate to ensure the crew member's proficiency in the performance of his or her assigned duties.

(2) The flight training and check specified in paragraph (1) must be performed—

(*i*) In-flight or in an appropriate flight simulation training device ; or

(*ii*) In commercial air transport operations, if performed under the supervision of a qualified flight navigator instructor and navigator check airman/designed examiner, as applicable.

(*d*) Each AOC holder shall ensure that initial flight training for pilots and flight engineers consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority :

(1) For one pilot in either an aircraft or flight simulation training devices—

(*i*) Piston-engined aircraft-PIC : 14 hours ; CP : 14 hours ; and FE : 12 hours.

(*ii*) Turbropropeller-powered aircraft-PIC : 15 hours ; CP : 15 hours ; and FE : 12 hours.

(*iii*) Turbo-jet aircraft-PIC : 20 hours ; CP : 16 hours ; and FE ; 12 hours.

(*iv*) Other aircraft-PIC and CP : 14 hours.

(2) For two pilots in a flight simulation training device—

(*i*) Piston-engined aircraft-PIC : 24 hours ; CP : 24 hours ; and FE : 20 hours.

(*ii*) Turbropropeller-powered aircraft-PIC : 24 hours ; CP : 24 hours ; and FE : 20 hours.

(*iii*) Turbo-jet aircraft-PIC : 28 hours ; CP : 28 hours ; and FE : 20 hours.

(*iv*) Other aircraft-PIC and CP : 24 hours.

Note : Training times in item (*d*) of this IS are higher than in 14 CFR and are taken from the FAA national norms in FAA Order 8900.1.

Initial Specialised Operations Training.

IS : 8.10.1.16.—(*a*) Each AOC holder shall provide initial specialised operations training to ensure that each pilot and flight operations officer is qualified in the type of operation in which he or she serves and in any specialised or new equipment, procedures, and techniques, such as :

(1) Long-range navigation.

(*i*) Knowledge of specialised navigation procedures, such as MNPS, NPAC.

(*ii*) Knowledge of specialised equipment, such as INS, LORAN, GPS.

(2) CAT II and CAT III approaches.

(3) Special equipment, procedures and practice.

(4) A demonstration of competency.

(5) Low visibility takeoff operations.

(*i*) Runway and lighting requirements.

(*ii*) Rejected takeoffs at, or near, V1 with a failure of the most critical engine.

(*iii*) Taxi operations.

(*iv*) Procedures to prevent runway incursions under low visibility conditions.

(6) Extended range operations with two engine aeroplanes.

(7) Approaches using on-board radar.

(8) Autopilot instead of Co-pilot.

Aircraft Differences.

IS : 8.10.1.17.—(*a*) Each AOC holder shall provide aircraft differences training for flight operations officers when the operator has aircraft variances within the same type of aircraft, which includes at least the following :

(1) Operations procedures—

(*i*) Operations under adverse weather phenomena conditions, including clear air turbulence, windshear, and thunderstorms.

(*ii*) Mass and balance computations and load control procedures.

(*iii*) Aircraft performance computations, to include takeoff mass limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations.

(*iv*) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis.

(*v*) Dispatch release preparation.

(*vi*) Crew briefings.

(*vii*) Flight monitoring procedures.

(*viii*) Flight crew response to various emergency situations, including the assistance the aircraft flight operations officer can provide in each situation.

(*ix*) MEL and CDL procedures.

(*x*) Manual performance of required procedures in case of the loss of automation capabilities.

(*xi*) Training in appropriate geographic areas.

(*xii*) ATC and instrument procedures, to include ground hold and central flow control procedures.

(*xiii*) Radio/telephone procedures.

(2) Emergency procedures—

(*i*) Actions taken to aid the flight crew.

(*ii*) AOC holder and Authority notification.

*Note*1 : The FAA Flight Standardisation Board, the Transport Canada and JAA Joint Operations Evaluation Board have a harmonised process and their reports are a source for differences training.

Note 2 : ICAO Doc 9376, Preparation of an Operations Manual, contains guidance material to design flight crew training programmes.

Note 3 : ICAO Doc 9379, Manual of Procedures for the Establishment of a State's Personnel Licensing System, contains guidance of a general nature on cross-crew qualification, mixed-fleet flying and cross-credit.

Aircraft and Instrument Proficiency Check-pilot.

IS : 8.10.1.20.—(*a*) Aircraft and instrument proficiency checks for PIC and CP must include the following operations and procedures listed in the appropriate skill test in Part 2, on each type or variant of type of aircraft.

(*b*) The oral and flight test phases of a proficiency check should not be conducted simultaneously.

(*c*) When the check pilot determines that an applicant's performance is unsatisfactory, the check pilot may terminate the flight test immediately or, with the consent of the applicant, continue with the flight test until the remaining events are completed.

(*d*) If the check must be terminated (for mechanical or other reasons) and there are events which still need to be repeated, the check pilot shall issue a letter of discontinuance, valid for 60 days, listing the specific areas of operation that have been successfully completed.

(*e*) Satisfactory completion of a proficiency check following completion of an approved air carrier training programme for the particular type aircraft, satisfies the requirement for an aircraft type rating skill test if—

(1) That proficiency check includes all manoeuvres and procedures required for a type rating skill test.

(2) Proficiency checks are to be conducted by a check pilot approved by the Authority.

(*f*) The PIC proficiency check given in accordance with Part 8 may be used to satisfy the proficiency requirements of Part 2 to act as a PIC.

(*g*) The CP proficiency check given in accordance with Part 8 may be used to satisfy the proficiency requirements of Part 2 to act as a CP.

(*h*) The AOC holder may combine recurrent training with the AOC holder's proficiency check if approved to do so by the Authority.

Pairing of Low Experience Pilots.

IS : 8.10.1.22.—(*a*) Situations designated as critical by the Authority at special aerodromes designated by the Authority or at special aerodromes designated by the AOC holder include—

(1) The prevailing visibility value in the latest weather report for the aerodrome is at or below 1200 m (3/4 statute mile).

(2) The runway visual range for the runway to be used is at or below 1200m (4000 ft).

(3) The runway to be used has water, snow, slush or similar conditions that may adversely affect aircraft performance.

(4) The braking action on the runway to be used is reported to be less than "*good*".

(5) The crosswind component for the runway to be used is in excess of 15 knots.

(6) Windshear is reported in the vicinity of the aerodrome.

(7) Any other condition in which the PIC determines it to be prudent to exercise the PIC's prerogative.

(*b*) Circumstances which would be routinely be considered for deviation from the required minimum line operating flight time include—

(1) A newly certified AOC holder does not employ any pilots who meet the minimum flight time requirements ;

(2) An existing AOC holder adds to its fleet a type aircraft not before proven for use in its operations ; or

(3) An existing AOC holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the aircraft operated from that domicile.

Note : ICAO Doc 9376, Preparation of an Operations Manual, provides additional guidance.

Competency Checks-Cabin Crew-members.

IS : 8.10.1.24.—(*a*) A check cabin crewmember, approved by the Authority, shall conduct competency checks for cabin crewmembers in the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.

(1) Emergency Equipment, as applicable :

(*i*) Emergency communication and notification systems.

(*ii*) Aircraft exits.

(*iii*) Exits with slides or sliderafts (emergency operation).

(*iv*) Slides and sliderafts in a ditching.

(*v*) Exits without slides (emergency operation).

(*vi*) Window exits (emergency operation).

(*vii*) Exits with tailcones (emergency operation).

(*viii*) Cockpit exits (emergency operation).

(*ix*) Ground evacuation and ditching equipment.

(*x*) First aid equipment.

(*xi*) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE).

(*xii*) Firefighting equipment.

(*xiii*) Emergency lighting systems.

(*xiv*) Additional emergency equipment.

(2) Emergency procedures-

(*i*) General types of emergencies specific to aircraft.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (*i.e.*, Passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Turbulence.

(*xii*) Other unusual situations.

(3) Emergency drills-

(*i*) Location and use of all emergency and safety equipment carried on the aeroplane.

(*ii*) The location and use of all types of exits.

(*iii*) Actual donning of a lifejacket where fitted.

(*iv*) Actual donning of protective breathing equipment (PBE).

(*v*) Actual handling of fire extinguishers.

(4) Crew Resource Management—

(*i*) Decision-making skills.

(*ii*) Briefings and developing open communication.

(*iii*) Inquiry, advocacy, and assertion training.

(*iv*) Workload management.

(5) Dangerous goods—

(*i*) Recognition of and transportation of dangerous goods.

(*ii*) Proper packaging, marking, and documentation.

(*iii*) Instructions regarding compatibility, loading, storage and handling characteristics.

(6) Security—

(*i*) Hijacking.

Competency Checks- Flight Operations Officer.

IS : 8.10.1.25.—(*a*) A check flight operations officer, approved by the Authority, shall conduct competency checks for flight operations officers in at least the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.

(1) Use of communications systems including the characteristics of those systems and the appropriate normal and emergency procedures ;

(2) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes ;

(3) The NOTAM system ;

(4) Navigational aids and publications ;

(5) Joint dispatcher-pilot responsibilities ;

(6) Characteristics of appropriate airports ;

(7) Prevailing weather phenomena and the available sources of weather information ;

(8) Air traffic control and instrument approach procedures ; and

(9) Approved dispatcher resource management (DRM) initial training.

Recurrent Training- flight Crew.

IS : 8.10.1.33.—(*a*) Each AOC holder shall establish a recurrent training programme for all flight crew members in the AOC holder's Operations Manual and shall have it approved by the Authority.

(*b*) Each flight crew member shall undergo recurrent training relevant to the type or variant of aircraft on which he or she is certified to operate and for the crew member position involved.

(*c*) Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

(*d*) Each AOC holder shall ensure that flight crew member recurrent ground training includes at least the following :

(1) General subjects.

(*i*) Flight locating procedures.

(*ii*) Principles and method for determining mass/balance and runway limitations.

(*iii*) Meteorology to ensure practical knowledge of weather phenomena including the principles of frontal system, icing, fog, thunderstorms, windshear, and high altitude weather situations.

(*iv*) ATC systems and phraseology.

(*v*) Navigation and use of navigational aids.

(*vi*) Normal and emergency communication procedures.

(*vii*) Visual cues before descent to MDA.

(*viii*) Accident/incident and occurrence review.

(*ix*) Other instructions necessary to ensure the pilot's competence.

(2) Aircraft systems and limitations—

(*i*) Normal, abnormal, and emergency procedures.

(*ii*) Aircraft performance characteristics.

(*iii*) Engines and,if applicable, propellers.

(*iv*) Major aircraft components.

(*v*) Major aircraft systems (i.e., flight controls, electric, hydraulic and other systems as appropriate).

(3) Ground icing and de-icing procedures and requirements.

(4) Emergency equipment and drills.

(5) Every 12 months—

(*i*) Location and use of all emergency and safety equipment carried on the aeroplane.

(*ii*) The location and use of all types of exits.

(*iii*) Actual donning of a lifejacket where fitted.

(*iv*) Actual donning of protective breathing equipment.

(*v*) Actual handling of fire extinguishers.

(6) Every 3 years—

(*i*) Operation of all types of exits.

(*ii*) Demonstration of the method used to operate a slide, where fitted.

(*iii*) Fire-fighting using equipment representative of that carried in the aeroplane on an actual or simulated fire.

Note : With Halon extinguishers, an alternative method acceptable to the Authority may be used.

(*iv*) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment.

(*v*) Actual handling of pyrotechnics, real or simulated, where fitted.

(*vi*) Demonstration in the use of the life-raft(s), where fitted.

(*vii*) An emergency evacuation drill.

(*viii*) A ditching drill, if applicable.

(*ix*) A rapid decompression drill, if applicable.

(7) Crew resource management—

(*i*) Decision-making skills.

(*ii*) Briefings and developing open communication.

(*iii*) Inquiry, advocacy, and assertion training.

(*iv*) Workload management.

(*v*) Situational awareness.

(8) Dangerous goods—

(*i*) Recognition of and transportation of dangerous goods.

(*ii*) Proper packaging, marking, and documentation.

(*iii*) Instructions regarding compatibility, loading, storage and handling characteristics.

(9) Security—

(*i*) Hijacking.

(*ii*) Disruptive passengers.

(*e*) Each AOC holder shall verify knowledge of the recurrent ground training by an oral or written examination.

(*f*) Each AOC holder shall ensure that pilot recurrent flight training include at least the following :

Note : Flight training may be conducted in an appropriate aircraft, adequate flight simulation training device (FSTD), or in a combination of aircraft and FSTD, as approved by the Authority.

(1) Preparation—

(*i*) Visual inspection (use of pictorial display authorised).

(*ii*) Pre-taxi procedures.

(2) Ground operation—

(*i*) Performance limitations.

(*ii*) Cockpit management.

(*iii*) Securing cargo.

(*iv*) Pushback.

(*v*) Powerback taxi, if applicable.

(*vi*) Starting.

(*vii*) Taxi.

(*viii*) Pre-takeoff checks.

(3) Takeoff—

(*i*) Normal.

(*ii*) Crosswind.

(*iii*) Rejected.

(*iv*) Power failure after V1.

(*v*) Powerplant failure during second segment.

(*vi*) Low Visibility Takeoff Operations.

(4) Climb—

(*i*) Normal.

(*ii*) One-engine inoperative climb to en route altitude.

(5) En route—

(*i*) Steep turns.

(*ii*) Approaches to stalls (takeoff, en route, and landing configurations).

(*iii*) Inflight powerplant shutdown.

(*iv*) Inflight powerplant restart.

(*v*) High speed handling characteristics.

(6) Descent—

(*i*) Normal.

(*ii*) Maximum rate.

(7) Approaches—

(*i*) VFR procedures.

(*ii*) Visual approach with 50% loss of power of available powerplants.

(*iii*) Visual approach with slat/flap malfunction.

(*iv*) IFR precision approaches (ILS normal and ILS with one-engine inoperative).

(*v*) IFR non-precision approaches (NDB normal and VOR normal).

(*vi*) Non-precision approach with one engine inoperative (LOC backcourse, SDF/LDA, GPS, TACAN and circling approach procedures).

Note : A Flight Simulation Training Device shall not be used for training/ checking on the circling manoeuvre unless it has been qualified for circling manoeuvres. The operator must be approved to conduct circling manoeuvres by the Authority to participate in that training and checking.

(*vii*) Missed approach from precision approach.

(*viii*) Missed approach from non-precision approach.

(*ix*) Missed approach with powerplant failure.

(8) Landings—

(*i*) Abnormal with a pitch mistrim (small aircraft only).

(*ii*) Abnormal from precision instrument approach.

(*iii*) Abnormal from precision instrument approach with most critical engine inoperative.

(*iv*) Abnormal with 50% loss of power of available powerplants.

(*v*) Abnormal with flap/slat malfunction.

(*vi*) Rejected landings.

(*vii*) Crosswind.

(*viii*) Short/soft field (small aircraft only).

(*ix*) Glassy/rough water (seaplanes only).

(*x*) Auto-rotation (helicopter only).

(9) After landing—

(*i*) Parking.

(*ii*) Emergency evacuation.

(*iii*) Docking, mooring, and ramping (seaplanes only).

(10) Other flight procedures during any airborne phase—

(*i*) Airborne Collision Avoidance System: use and avoidance maneuvers

(*ii*) Holding.

(*iii*) Ice accumulation on airframe.

(*iv*) Air hazard avoidance.

(*v*) Windshear/microburst.

(11) Normal, abnormal and alternate systems procedures during any phase—

(*i*) Pneumatic/pressurisation.

(*ii*) Air conditioning.

(*iii*) Fuel and oil.

(*iv*) Electrical.

(*v*) Hydraulic.

(*vi*) Flight controls.

(*vii*) Anti-icing and deicing systems.

(*viii*) Flight management guidance systems and/or automatic or other approach and landing aids.

(*ix*) Stall warning devices, stall avoidance devices, and stability augmentation systems.

(*x*) Airborne weather radar.

(*xi*) Flight instrument system malfunction.

(*xii*) Communications equipment.

(*xiii*) Navigation systems.

(*xiv*) Autopilot.

(*xv*) Approach and landing aids.

(*xvi*) Flight instrument system malfunction.

(12) Emergency systems procedures during any phase—

(*i*) Aircraft fire.

(*ii*) Smoke control.

(*iii*) Powerplant malfunctions.

(*iv*) Fuel jettison.

(*v*) Electrical, hydraulic, pneumatic systems.

(*vi*) Flight control system malfunction.

(*vii*) Landing gear and flap system malfunction.

(*g*) Each AOC holder shall ensure that flight engineer recurrent flight training includes at least the flight training specified in IS : 8.10.1.15(*b*).

(*h*) Each AOC holder shall ensure that flight navigator recurrent training includes enough training and an in-flight check to ensure competency with respect to operating procedures and navigation equipment to be used and familiarity with essential navigation information pertaining to the AOC holder's routes that require a flight navigator.

(*i*) The AOC holder may combine recurrent training with the AOC holder's proficiency check if approved by the Authority.

(*j*)Recurrent ground and flight training curricula may accomplished concurrently or intermixed, but completion of each of these curricula shall be recorded separately.

Recurrent Normal and Emergency Training-cabin Crew Members.

IS : 8.10.1.34.—(*a*) Each AOC holder shall establish and have approved by the Authority a recurrent training programme for all cabin crew members.

(*b*) Each cabin crew member shall undergo recurrent training in evacuation and other appropriate normal and emergency procedures and drills relevant to his or her assigned positions and the type(s) and/or variant(s) of aircraft on which he or she operates.

(*c*) Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

(*d*) Each AOC holder shall ensure that, every 12 months, each cabin crew member receive recurrent training in at least the following :

(1) Emergency equipment, if applicable—

(*i*) Emergency communication and notification systems.

(*ii*) Aircraft exits.

(*iii*) Exits with slides or sliderafts (emergency operation).

(*iv*) Slides and sliderafts in a ditching.

(*v*) Exits without slides (emergency operation).

(*vi*) Window exits (emergency operation).

(*vii*) Exits with tailcones (emergency operation).

(*viii*) Cockpit exits (emergency operation).

(*ix*) Ground evacuation and ditching equipment.

(*x*) First aid equipment.

(*xi*) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE)).

(*xii*) Firefighting equipment.

(*xiii*) Emergency lighting systems.

(*xiv*) Additional emergency equipment.

(2) Emergency procedures—

(*i*) General types of emergencies specific to aircraft.

(*ii*) Emergency communication signals and procedures.

(*iii*) Rapid decompression.

(*iv*) Insidious decompression and cracked window and pressure seal leaks.

(*v*) Fires.

(*vi*) Ditching.

(*vii*) Ground evacuation.

(*viii*) Unwarranted evacuation (i.e., passenger initiated).

(*ix*) Illness or injury.

(*x*) Abnormal situations involving passengers or crew members.

(*xi*) Turbulence.

(*xii*) Other unusual situations.

(3) Emergency drills.

(4) Every 12 months—

(*i*) Location and use of all emergency and safety equipment carried on the aeroplane.

(*ii*) The location and use of all types of exits.

(*iii*) Actual donning of a lifejacket where fitted.

(*iv*) Actual donning of protective breathing equipment(PBE).

(*v*) Actual handling of fire extinguishers.

(5) Every 3 years—

(*i*) Operation of all types of exits.

(*ii*) Demonstration of the method used to operate a slide, where fitted.

(*iii*) Fire-fighting using equipment representative of that carried in the aeroplane on an actual or simulated fire.

Note : With Halon extinguishers, an alternative method acceptable to the Authority may be used.

(*iv*) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment.

(*v*) Actual handling of pyrotechnics, real or simulated, where fitted.

(*vi*) Demonstration in the use of the life-raft(s), where fitted.

(*vii*) An emergency evacuation drill.

(*viii*) A ditching drill, if applicable.

(*ix*) A rapid decompression drill, if applicable.

(6) Crew resource management—

(*i*) Decision-making skills.

(*ii*) Briefings and developing open communication.

(*iii*) Inquiry, advocacy, and assertion training.

(*iv*) Workload management.

(7) Dangerous goods—

(*i*) Recognition of and transportation of dangerous goods.

(*ii*) Proper packaging, marking, and documentation.

(*iii*) Instructions regarding compatibility, loading, storage and handling characteristics.

(8) Security—

(*i*) Hijacking.

(*ii*) Disruptive passengers.

(*e*) Each AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

(*f*) An AOC holder, if approved by the Authority, may administer each of the recurrent training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

Recurrent Training-flight Operations Officer.

IS : 8.10.1.35.—(*a*) Each AOC holder shall establish and maintain a recurrent training programme, approved by the Authority and established in the AOC holder's Operations Manual, to be completed annually by each flight operations officer.

(*b*) Each flight operations officer shall undergo recurrent training relevant to the type(s) and/or variant(s) of aircraft and the operations conducted by the AOC holder, and that training shall consist of at least the following hours of instruction—

(1) Piston-engined aircraft-8 hours.

(2) Turbopropeller-powered aircraft-10 hours.

(3) Turbo-jet aircraft-20 hours.

(4) Other aircraft to includerotorcraft-10 hours.

(*c*) Each AOC holder shall have all recurrent training conducted by a qualified flight dispatcher instructor.

(*d*) An AOC holder shall ensure that, every 12 months, each flight operations officer receives recurrent training in the subjects required for initial training listed in IS : 8.10.1.14*D* in sufficient detail to ensure competency in each specified area of training. Operators may choose to provide in-depth coverage of selected subjects on any one cycle of training. In such cases the operator's training programme must cover all the subjects to the detail required for initial qualification within three years.

(*e*) Each AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

(*f*) An AOC holder shall record completion of the required training.

Instructor Training.

IS : 8.10.1.37.—(*a*) Flight crew instructor training.

(1) No operator may use a person, nor may any person serve as flight instructor in a training programme unless :

(*i*) That person has satisfactorily completed initial or transition flight instructor training ; and

(*ii*) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check personnel.

(2) An AOC holder may accomplish the observation check for a flight instructor, in part or in full, in an aircraft or a flight simulation training device.

(3) Each AOC holder shall ensure that initial ground training for flight instructors includes the following—

(*i*) Flight instructor duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of :

(*v*) Improper and insufficient training ; and

(*vi*) Personal characteristics of an applicant that could adversely affect safety.

(*vii*) Appropriate corrective action in the case of unsatisfactory checks.

(*viii*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

(*ix*) Except for holders of existing flight instructor licences :

(*a*) The fundamental principles of the teaching-learning process ;

(*b*) Teaching methods and procedures ; and

(*c*) The instructor-student relationship.

(4) Each AOC holder shall ensure that the transition ground training for flight instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the flight instructor is in transition.

(5) Each AOC holder shall ensure that the initial and transition flight training for flight instructors includes the following :

(*i*) The safety measures for emergency situations that are likely to develop during instruction.

(*ii*) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(*iii*) For pilot flight instructor (aircraft):

(*a*) Inflight training and practice in conducting flight instruction from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence as an instructor ; and

(*b*) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.

(6) For flight engineer instructors and flight navigator instructors, in-flight training to ensure competence to perform assigned duties.

(7) An AOC holder may accomplish the flight training requirements for flight instructors in full or in part in flight or in a flight simulation training device, as appropriate.

(8) An AOC holder shall ensure that the initial and transition flight training for flight instructors (flight simulation training device) includes the following :

(*i*) Training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this part. This training and practice shall be accomplished in full or in part in a flight simulation training device.

(*ii*) Training in the operation of flight simulation training devices, to ensure competence to conduct the flight instruction required by this Part.

(*b*) Cabin crew instructor training.

(1) No operator may use a person, nor may any person serve as cabin instructor in a training programme unless:

(*i*) That person has satisfactorily completed initial or transition cabin instructor training ; and

(*ii*) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check airman.

(2) An AOC holder may accomplish the observation check for a cabin instructor, in part or in full, in an aircraft or a cabin simulation training device.

(3) Each AOC holder shall ensure that initial ground training for cabin instructors includes the following—

(*i*) Cabin instructor duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of:

(*A*) Improper and insufficient training ; and

(*B*) Personal characteristics of an applicant that could adversely affect safety.

(*v*) Appropriate corrective action in the case of unsatisfactory checks.

(*vi*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft, as applicable.

(*vii*) Except for existing cabin instructors :

(*A*) The fundamental principles of the teaching-learning process ;

(*B*) Teaching methods and procedures ; and

(*C*) The instructor-student relationship.

(4) Each AOC holder shall ensure that the transition ground training for cabin instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft, as appropriate to which the cabin instructor is in transition.

(5) Each AOC holder shall ensure that the initial and transition flight training for cabin instructors includes the following :

(*i*) The safety measures for emergency situations that are likely to develop during instruction.

(*ii*) The potential results of improper, untimely, or non-execution of safety measures during instruction.

(*c*) Flight operations officer instructor training.

(1) No operator may use a person, nor may any person serve as flight operations officer instructor in a training programme unless :

(*i*) That person has satisfactorily completed initial or transition flight operations officer instructor training ; and

(*ii*) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check flight operations officer.

(2) An AOC holder may accomplish the observation check for a flight operations officer instructor, in part or in full, in a flight operations centre.

(3) Each AOC holder shall ensure that initial ground training for flight operations officer instructors includes the following :

(*i*) Flight operations officer instructor duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of :

(*A*) Improper and insufficient training ; and

(*B*) Personal characteristics of an applicant that could adversely affect safety.

(*v*) Appropriate corrective action in the case of unsatisfactory checks.

(*vi*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures for the aircraft or position involved.

(*vii*) Except for holders of existing flight operations officer instructor licences :

(4) The fundamental principles of the teaching-learning process ;

(5) Teaching methods and procedures ; and

(*i*) The instructor-student relationship.

(6) Each AOC holder shall ensure that the transition ground training for flight operations officer instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft or position involved to which the flight operations officer instructor is in transition.

(7) Each AOC holder shall ensure that the initial and transition training for flight operations officer instructors includes the following :

(*i*) The safety measures for emergency situations that are likely to develop during instruction in a flight operations centre.

(*ii*) The potential results of improper, untimely, or non-execution of safety measures during instruction in a flight operations centre.

IS : 8.10.1.40.—(*a*) Training for check personnel-general.

Check Personnel Training.

(1) No operator may use a person, nor may any person serve as a check personin a training programme unless, with respect to the aircraft type involved, that person has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as PIC, flight engineer, navigator, cabin crewmember, or flight operations officer,as applicable.

(2) Each AOC holder shall ensure that initial ground training for check personnel includes :

(*i*) Check personnel duties, functions, and responsibilities.

(*ii*) Applicable regulations and the AOC holder's policies and procedures.

(*iii*) Appropriate methods, procedures, and techniques for conducting the required checks.

(*iv*) Proper evaluation of student performance including the detection of :

(*v*) Improper and insufficient training.

(*vi*) Personal characteristics of an applicant that could adversely affect safety.

(*A*) Appropriate corrective action in the case of unsatisfactory checks.

(*B*) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

(3) Transition ground training for all check personnel, shall include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the check person is in transition.

(*b*) Training for check personnel of flight crew.

(1) For check pilots, each AOC holder shall ensure that the initial and transition flight training includes :

(*i*) Training and practice in conducting flight evaluations (from the left and right pilot seats for pilot check airmen) in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks.

(*ii*) The potential results of improper, untimely or non-execution of safety measures during an evaluation.

(*iii*) The safety measures (to be taken from either pilot seat for check pilot) for emergency situations that are likely to develop during an evaluation.

(2) For checkflight engineers and check flight navigators, each AOC holder shall ensure training to ensure competence to perform assigned duties to include :

(*i*) The safety measures for emergency situations that are likely to develop during a check.

(*ii*) The potential results of improper, untimely or non-execution of safety measures during a check.

(3) Each AOC holder shall ensure that the initial and transition flight training for check personnel (simulator) includes :

(*i*) Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the checks required by this part (this training and practice shall be accomplished in a flight simulation training device).

(*ii*) Training in the operation of flight simulation training devices, to ensure competence to conduct the checks required by this Part.

(4) An AOC holder may accomplish flight training for check personnel, in full or in part in an aircraft or in a flight simulation training device, as appropriate.

(5) The AOC holder shall record the training in each individuals training record maintained by the AOC holder.

(*c*) Training for check cabin crew members.

(1) For check cabin crewmembers, each AOC holder shall ensure that the training includes :

(*i*) The safety measures for emergency situations that are likely to develop during a check ; and

(*ii*) The potential results of improper, untimely or non-execution of safety measures during a check.

(*d*) Training for check flight operations officers.

(1) For check flight operations officers, each AOC holder shall ensure that the training includes :

(*i*) The safety measures for emergency situations that are likely to develop during a check ; and

(*ii*) The potential results of improper, untimely or non-execution of safety measures during a check.

(*e*) The AOC holder shall record the training in each individuals training record maintained by the AOC holder.

Duty and Rest Periods.

IS : 8.12.1.3.—(*a*) Each AOC holder, scheduling official and crew member shall use the following tables as appropriate, to consolidate all scheduling and actual event requirements with respect to crew member flight time, duty and rest periods for commercial air transport operations.

Note : Each Contracting State is required to have flight and duty time regulations. The domestic flight operations times in Tables 1 and 2 are from the United States and are used as an example.

Table 1

Conditions Required for Flight Crew Member Rest Reduction			
Flight Deck Duty Period (Hours)	Normal Rest Period (Hours)	Authorised Reduced Rest Period (Hours)	Next Rest Period if Reduction Taken
Less than 8	9	8	10
8-9	10	8	11
9 or more	11	9	12

Table 2

Conditions Required for Cabin Crew Member Rest Reduction				
Scheduled Duty Period (Hours)	Extra Cabin Crew Members Required	Normal Rest Period Hours	Authorised Reduced Rest Period (Hours)	Next Rest Period if Reduction Taken
14 or less	0	9	8	10
14-16	1	12	10	14
16-18	2	12	10	14
18-20	3	12	10	14

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B 1806

NIGERIA CIVIL AVIATION REGULATIONS

PART 9 — AIR OPERATOR CERTIFICATION AND ADMINISTRATION

INTRODUCTION

Part 9 of these Regulations sets forth the requirements for persons or entities to be granted an AOC certification from Nigeria.

Part 9 includes regulations concerning the AOC certificate, flight operations management, maintenance requirements, security management, and dangerous goods management and shipping. The regulations in this Part address the standards in ICAO Annex 18 and the air operator requirements of ICAO Annex 6, Parts I and III.

B 1808

NIGERIA CIVIL AVIATION REGULATIONS

PART 9 — AIR OPERATOR CERTIFICATION AND ADMINISTRATION

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NIGERIA CIVIL AVIATION REGULATIONS

PART 9 — AIR OPERATOR CERTIFICATION AND ADMINISTRATION

9.1.. Air Operator Certificate

9.1.1.1.—(*a*) Part 9 applies to the carriage of passengers, cargo or mail for remuneration or hire by persons whose principal place of business or permanent residence is located in Nigeria. Applicability.

(*b*) This Part of the regulations prescribes requirements for the original certification and continued validity of air operator certificates (AOC) issued by Nigeria.

(*c*) Except where specifically noted, Part 9 applies to all commercial air transport operations by AOC holders for which Nigeria is the State of the Operator under the definitions provided in Annex 6 to the Convention on International Civil Aviation.

9.1.1.2.—(*a*)For the purpose of Part 9, the following definitions shall apply— Definitions.

(1) *Accountable manager.* The person acceptable to the Authority who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Authority, and any additional requirements defined by the operator.

(2) *Acceptance checklist.* A document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met.

(3) *Aircraft operating manual.* A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems, and other material relevant to the operation of the aircraft.

(4) *Aircraft technical log.* Documentation for an aircraft that includes the maintenance record for the aircraft and a record for each flight made by the aircraft. The aircraft technical log is comprised of a journey records section and a maintenance section.

(5) *Air Operator Certificate (AOC).* A certificate authorising an operator to carry out specified commercial air transport operations.

(6) *Airworthiness release.* The air operator's aircraft are released for service following maintenance by a person specifically authorised by the air operator rather than by an individual or maintenance organisation on their own behalf.

Note : An airworthiness release is not the same as a maintenance release or a maintenance return to service as described in Parts 5 and 6. Regarding the airworthiness release, in effect, the person signing the release acts in the capacity of an authorised agent for the operator and is certifying that the maintenance covered by the release was accomplished according to the air operator's continuous maintenance programme. Normally, a release is required following inspections prescribed by the air operator's operations specifications and maintenance activities involving inspections, and any other significant maintenance. A copy of the airworthiness release must be given to the pilot in command before the aircraft commences operations. In addition, the air operator shall designate when an airworthiness release is required.
The air operator is obligated to designate, by name or occupational title, each licensed AME or maintenance organisation authorised to execute the airworthiness release. In addition, the air operator shall designate when an airworthiness release is required.

(7) *Cabin crew member.* A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

(8) *Cargo aircraft.* Any aircraft carrying goods or property but not passengers. In this context the following are not considered to be passengers :

(*i*) A crewmember.

(*ii*) An operator's employee permitted by, and carried in accordance with, the instructions contained in the Operations Manual.

(*iii*) An authorised representative of an Authority.

(*iv*) A person with duties in respect of a particular shipment on board.

(9) *Commercial air transport operation.* An aircraft operation involving the public transport of passengers, cargo or mail for remuneration or hire.

(10)*Configuration deviation list (CDL).* A list established by the organisation responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

(11) *Consignment.* One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.

(12) *Crew member.* A person assigned by an operator to duty on an aircraft during a flight duty period. (*Annex* 6)

(13) *Dangerous goods.* Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the ICAO Technical Instructions (see definition below) or which are classified according to those Instructions. (Annex 6)

(14) *Dangerous goods accident.* An occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property damage.

(15) *Dangerous goods incident.* An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants is deemed to constitute a dangerous goods incident.

(16) *Dangerous goods transport document.* A document specified by the ICAO Technical Instructions for the Safe Transportation of Dangerous Goods by Air. It is completed by the person who offers dangerous goods for air transport and contains information about those dangerous goods.The document bears a signed declaration indicating that the dangerous goods are fully and accurately described by their proper shipping names and UN numbers (if assigned) and that they are correctly classified, packed, marked, labelled and in a proper condition for transport.

(*i*) See definition of Technical Instructions below.

(17) *Directly in charge.* A person assigned to a position in which he or she is responsible for the work of a shop or station that performed maintenance, preventive maintenance, or modifications, or other functions affecting aircraft airworthiness.

(18) *Enhanced Vision System (EVS).* A system to display electronic real-time images of the external scene achieved through the use of image sensors.

(19) *Equivalent system of maintenance.* An AOC holder may conduct its own maintenance, preventive maintenance, or modification, so long as the AOC holder's maintenance system is approved by the Authority and is equivalent to that of an AMO.

(20) *Exception.* A provision in ICAO Annex 18 which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

(21) *Flight crew member.* A licensed crew member charged with duties essential to the operation of an aircraft on the flight deck during a flight duty period.

(22) *Flight operations officer/flight dispatcher.* A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

(23) *Freight container.* See unit load device.

(24) *Freight container in the case of radioactive material transport.*

An article of transport equipment designed to facilitate the transport of packaged goods, by one or more modes of transport without intermediate reloading. It must be of a permanent enclosed character, rigid and strong enough for repeated use, and must be fitted with devices facilitating its handling, particularly in transfer between aircraft and from one mode of transport to another. A small freight container is that which has either an overall outer dimension less than 1.5 m, or an internal volume of not more than $3m^3$. Any other freight container is considered to be a large freight container.

(25) *Ground handling.* Services necessary for an aircraft's arrival at, and departure from, and airport, other than air traffic services.

(26) *Handling agent.* An agency which performs on behalf of the operator some or all of the latter's functions including receiving, loading, unloading, transferring or other processing of passengers or cargo.

(27) *Head-Up Display (HUD).* A display system that presents flight information into the pilot's forward external field of view.

(28) *Holdover time.* The estimated time deicing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft. Holdover time begins when the final application of deicing or anti-icing fluid commences and expires when the deicing or anti-icing fluid applied to the aircraft loses its effectiveness.

(29) *Human factors principles.* Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

(30) *Incompatible.* Describing dangerous goods, which if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.

(31) *Instrument Meteorological Condition (IMC).* Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

(32) *Interchange agreement.* A leasing agreement which permits an air carrier to dry lease and take or relinquish operational control of an aircraft at an airport.

(33) *Maintenance control manual.* A document that describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

(34) *Maintenance procedures manual.* A document endorsed by the head of the maintenance organisation which details the maintenance organisation's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

(35) *Maintenance release.* A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organisation's procedures manual or under an equivalent system.

Note. The responsibility for each step of the accomplished maintenance is borne by the person signing that step and the maintenance release certifies the entire maintenance work package. This arrangement in no way reduces the responsibility of licensed aircraft maintenance Engineer (AME) or maintenance organisations for maintenance functions or tasks they perform. The air operator is obligated to designate, by name or occupational title, each licensed AME or maintenance organisation authorised to execute the airworthiness release.

(36) *Operational control.* The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of safety of the aircraft and the regularity and efficiency of the flight.

(37) *Operational flight plan.* The operator's plan for the safe conduct of the flight based on consideration of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes/heliports concerned.

(38) *Operations manual.* A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

(39) *Operator.* A person, organisation or enterprise engaged in or offering to engage in an aircraft operation. (*Annex* 6)

(40) *Overpack.* An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

(41) *Package.* The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

(42) *Packaging.* Receptacles and any other components or materials necessary for the receptacle to perform its containment function.

(43) *Passenger aircraft.* An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorised representative of an appropriate national authority or a person accompanying a consignment or other cargo.

(44) *Proper shipping name.* The name to be used to describe a particular article or substance in all shipping documents and notifications and, where appropriate, on packaging.

(45) *Quality assurance.* Quality assurance, as distinguished from quality control, involves activities in the business, systems, and technical audit areas. A set of predetermined, systematic actions which are required to provide adequate confidence that a product or service satisfies quality requirements.

(46) *Quality control.* The regulatory inspection process through which actual performance is compared with standards, such as the maintenance of standards of manufactured aeronautical products, and any difference is acted upon.

(47) *Quality system.* The organisational structure, responsibilities, procedures, processes and resources for implementing quality management.

(48) *Safety Management System (SMS).* A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures.

(49) *Serious injury.* An injury which is sustained by a person in an accident and which :

(*i*) Requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received ;

(*ii*) Results in a fracture of any bone (except simple fractures of fingers, toes or nose) ;

(*iii*) Involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage ;

(*iv*) Involves injury to any internal organ ;

(*v*) Involves second or third degree burns, or any burns affecting more than 5% of the body surface ; or (*vi*) Involves verified exposure to infectious substances or injurious radiation.

(50) *State of origin.* The State in which dangerous goods were first loaded on an aircraft.

(51) *Technical instructions.* The latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc. 9284-AN/905), including the supplement and any addendum, approved and published by decision of the Council of the ICAO. The term "Technical Instructions" is used in this Part.

(52) *Training to proficiency.* The process of the check airman administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period.

(53) *UN number.* The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

(54) *Unit load device.* Any type of freight container, aircraft container aircraft pallet with a net or aircraft pallet with a net over an igloo.

(55) *Visual meteorological conditions.* Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

Abbreviations.

9.1.1.3—(*a*) The following abbreviations are used in Part 9.

(1) AOC — Air Operator Certificate
(2) AME — Aircraft Maintenance Engineer
(3) AMO — Approved Maintenance Organisation
(4) ATP — Air Transport Pilot
(5) CAT — Commercial Air Transport
(6) CDL — Configuration Deviation List
(7) IFR — Instrument Flight Rules
(8) IMC — Instrument Meteorological Conditions
(9) LOV — Limit of Validity
(10) MEL — Minimum Equipment List
(11) PIC — Pilot-In-Command
(12) RFFS — Rescue and Fire Fighting Service
(13) RVR — Runway Visual Range
(14) RVSM — Reduced Vertical Separation Minimum
(15) SMS — Safety Management System
(16) UN — United Nations
(17) VFR — Visual Flight Rules
(18) VMC — Visual Meteorological Conditions

Compliance with an Air Operator Certificate.

9.1.1.4—(*a*) No operator may operate an aircraft in commercial air transport unless that operator holds an AOC for the operations being conducted.

(*b*) No person may operate an aircraft in commercial air transport operations which are not authorised by the terms and conditions of its AOC.

(*c*) Each AOC holder shall carry a certified true copy of the air operator certificate and a copy of the operations specifications relevant to the aircraft type, issued in conjunction with the certificate on board its aircraft. When the certificate and the associated operations specifications are issued by the State of the Operator in a language other than English, and English translation shall be included.

(*d*) Each AOC holder shall, at all times, continue in compliance with the AOC terms, conditions of issuance, and maintenance requirements in order to hold that certificate.

Application for an Air Operator Certificate.

9.1.1.5—(*a*) An operator applying to the Authority for an AOC shall submit an application**—**

(1) In a form and manner prescribed by the Authority ; and

(2) Containing any information the Authority requires the applicant to submit.

(*b*) Each applicant shall make the application for an initial issue of an AOC at least 90 days before the date of intended operation.

(*c*) At the time of application, the applicant shall provide all information and manuals required under this Part and the safety management system documentation required by Part 20.

Issuance or Denial of Air Operator Certificate.

9.1.1.6 (*a*) The Authority may issue an AOC if, after investigation, the Authority finds that the applicant—

(1) Is a citizen of NIGERIA ;

(2) Has its principal place of business and its registered office, if any, located in NIGERIA ;

(3) Meets the applicable regulations and standards for the holder of an AOC ;

(4) Is properly and adequately equipped for safe operations in commercial air transport and maintenance of the aircraft ; and

(5) Holds the economic authority issued by NIGERIA under the provisions of this Regulation.

(*b*) The Authority may deny application for an AOC if the Authority finds that—

(1) The applicant is not properly or adequately equipped or is not able to conduct safe operations in commercial air transport ;

(2) The applicant does not have :

(*i*) for scheduled operation, at least three (3) Nigerian registered airworthy aircraft capable of servicing its approved schedule for an initial AOC issuance.

(*ii*) for scheduled operation, at least two (2) airworthy aircraft capable of servicing its approved schedule if it is already in operation.

(*iii*) for non-scheduled operation, at least one (1) Nigerian registered aircraft.

(3) The applicant previously held an AOC which was revoked ; or

(4) An individual that contributed to the circumstances causing the revocation process of an AOC obtains a substantial ownership or is employed in a position required by this regulation.

Contents of Air Operator Certificate.

9.1.1.7—(*a*) The AOC will consist of two documents—

(1) A one-page certificate for public display signed by the Authority, and

(2) Operations specifications containing the terms and conditions applicable to the AOC holder's certificate.

(*b*) The Authority will issue an AOC which will contain—

(1) The State of the Operator and the issuing authority;

(2) The Air Operator Certificate number and its expiration date;

(3) The operator name, trading name (if different) and address of the principal place of business ;

(4) The date of issue and the name, signature and title of the Authority representative, and

(5) The location, in a controlled document carried on board, where the contact details of operational management can be found.

(*c*) *See* IS 9.1.1.7(*c*) for detailed requirements on the layout and content of the Air Operator Certificate.

(*d*) The operations specifications associated with the Air Operator Certificate shall contain the authorisations, conditions, limitations and approvals issued by the authority in accordance with the standards which are applicable to operations and maintenance conducted by the AOC holder.

(*e*) *See* IS 9.1.1.7(e) for the layout and content of the Operations Specifications.

(*f*) Air operator certificates and their associated operations specifications first issued from November 2008 shall follow the layouts of IS 9.1.1.7(*c*)(e).

Duration of an Air Operator Certificate.

9.1.1.8—(*a*) An AOC, or any portion of the AOC, issued by the Authority is effective and valid for twenty four (24) months unless—

(1) The Authority amends, suspends, revokes or otherwise terminates the certificate ;

(2) The AOC holder surrenders it to the Authority; or

(3) The AOC holder does not conduct any kind of operation for more than the time specified in 9.1.1.12 and fails to follow the procedures of 9.1.1.12 upon resuming that kind of operation.

(*b*) An AOC holder shall make application for renewal of an AOC at least 30 days before the end of the existing period of validity.

Amendment of an Air Operator Certificate.

9.1.1.9—(*a*) The Authority may amend any AOC if—

(1) The Authority determines that safety in commercial air transport and the public interest require the amendment ; or

(2) The AOC holder applies for an amendment, and the Authority determines that safety in commercial air transport and the public interest allows the amendment.

(*b*) If the Authority stipulates in writing that an emergency exists requiring immediate amendment in the public interest with respect to safety in commercial air transportation, such an amendment is effective without stay on the date the AOC holder receives notice.

(*c*) An AOC holder may appeal the amendment, but shall operate in accordance with it, unless it is subsequently withdrawn.

(*d*) Amendments proposed by the Authority, other than emergency amendments, become effective 30 days after notice to the AOC holder, unless the AOC holder appeals the proposal in writing prior to the effective date. The filing of an appeal stays the effective date until the appeal process is completed.

(*e*) Amendments proposed by the AOC holder shall be made at least 30 days prior to the intended date of any operation under that amendment.

(*f*) No person may perform a commercial air transport operation for which an AOC amendment is required, unless it has received notice of the approval from the Authority.

Access for Inspection.

9.1.1.10—(*a*) To determine continued compliance with the applicable regulations, the AOC holder shall—

(1) Grant the Authority access to and co-operation with any of its organisations, facilities and aircraft ;

(2) Ensure that the Authority is granted access to and co-operation with any organisation or facilities that it has contracted for services associated with commercial air transport operations and maintenance for services ; and

(3) Grant the Authority free and uninterrupted access to the flight deck of the aircraft during flight operations.

(*b*) Each AOC holder shall provide to the Authority a forward observer's seat on each of the AOC holder's aircraft from which the flight crew's actions and conversations may be easily observed.

Conducting Tests and Inspections.

9.1.1.11—(*a*) The Authority will conduct on-going validation of the AOC holder's continued eligibility to hold its AOC and associated approvals.

(*b*) The AOC holder shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether an AOC holder is complying with the applicable laws, regulations and AOC terms and conditions.

(*c*) The AOC holder shall make available at its principal base of operations—

(1) All portions of its current Air Operator Certificate ;

(2) All portions of its Operations and Maintenance Manuals ; and

(3) A current listing that includes the location and individual positions responsible for each record, document and report required to be kept by the AOC holder under the applicable aviation law, regulations or standards.

(*d*) Failure by any AOC holder to make available to the Authority upon request, all portions of the AOC, Operations and Maintenance Manuals and any required record, document or report is grounds for suspension of all or part of the AOC.

Recency of Operations.

9.1.1.12—(*a*) Except as provided in paragraph (b) of this section, no AOC holder may conduct a kind of operation for which it holds authority in its operations specifications unless the AOC holder has conducted that kind of operation within the preceding number of consecutive calendar days specified in this paragraph :

(1) For scheduled operations—30 days.

(2) For non-scheduled operations—90 days, except that if the AOC holder has authority to conduct scheduled operations, and has conducted scheduled operations within the previous 30 days, this paragraph does not apply.

(*b*) If an AOC holder does not conduct a kind of operation for which it is authorized in its operations specifications within the number of calendar days specified in paragraph (*a*) of this section, it shall not conduct such kind of operation until—

(1) It advises the Authority at least 5 consecutive calendar days before resumption of that kind of operation ; and

(2) It makes itself available and accessible for the Authority to conduct a full inspection/ re-examination to determine whether the AOC holder remains properly and adequately equipped and able to conduct a safe operation ; and

(3) The Authority issues it a re-validation document authorizing such kind of operation.

9.2. Air Operator Certification and Continued Validity

Applicability.

9.2.1.1.—(*a*) Subpart 9.2 provides requirements applicable to the certification and continued validity of all AOC holders.

9.2.2 Administration

Base of Operations.

9.2.2.1.—(*a*) Each AOC holder that is not authorised to conduct maintenance under its AOC certificate shall maintain a principal base of operations.

(b) Each AOC holder that is authorised to conduct maintenance under its AOC certificate shall maintain a principal base of operations and maintenance.

(c) An AOC holder may establish a main operations base and a main maintenance base at the same location or at separate locations.

(d) Each AOC holder shall provide written notification of intent to the Authority at least 30 days before it proposes to establish or change the location of either base.

Management Personnel Required for Commercial Air Transport Operations.

9.2.2.2.—(*a*) Each AOC holder shall have an accountable manager, acceptable to the Authority, who has corporate authority for ensuring that all flight operations and maintenance activities can be financed and carried out to the highest degree of safety standards required by the Authority.

(b) When conducting commercial air transport operations, the AOC holder shall have qualified personnel, with proven competency in civil aviation, available and serving full-time in the following positions or their equivalent :

(1) Director of Operations.
(2) Chief Pilot.
(3) Director of Maintenance.

(*c*) The Authority may approve positions or numbers of positions, other than those listed, if the AOC holder is able to show that it can perform the operation with the highest degree of safety under the direction of fewer or different categories of management personnel due to the—

(1) The kind of operations involved ;
(2) The number of aircraft used ; and
(3) The area of operation.

(*d*) *See* IS: 9.2.2.2 for additional management personnel requirements.

(*e*) The individuals who serve in the positions required or approved under this section and anyone in a position to exercise control over operations conducted under the AOC must :

(1) Be qualified through training, experience, and expertise ;

(2) Discharge their duties to meet applicable legal requirements and to maintain safe operations ; and

(3) To the extent of their responsibilities, have a full understanding of the following materials with respect of the AOC holder's operation :

(*i*) Aviation safety standards and safe operating practices ;

(*ii*) These regulations ;

(*iii*) The AOC holder's operations specifications ;

(*iv*) All appropriate maintenance and airworthiness requirements of this Part ;

(*v*) The manuals requirements of this Part.

(*f*) Each AOC holder must :

(1) State in the general policy provisions of the operations manual the duties, responsibilities and authority of personnel required by this section ;

(2) List in the operations manual the names and business addresses of the individuals assigned to those positions ; and

(3) Notify the Authority within 10 days of any change in personnel or any vacancy in any position listed.

Quality System.

9.2.2.3—(*a*) Each AOC holder shall establish a quality system and designate a quality manager to monitor compliance with, and adequacy of, procedures required to ensure safe operational practices and airworthy aircraft. Compliance monitoring shall include a feedback system to the accountable manager to ensure corrective action as necessary.

(*b*) Each AOC holder shall ensure that the quality system includes a quality assurance programme that contains procedures designed to verify that all operations are being conducted in accordance with all applicable requirements, standards and procedures.

(*c*) The quality system, and the quality manager, shall be acceptable to the Authority.

(*d*) Each AOC holder shall describe the quality system in relevant documentation as outlined in IS: 9.2.2.3.

(*e*) Notwithstanding (a) above, the Authority may accept the nomination of two Quality Managers, one for operations and one for maintenance, provided that the operator has designated one Quality Management Unit to ensure that the Quality System is applied uniformly throughout the entire operation.

(*f*) Where the AOC holder is also an AMO, the AOC holder's quality management system may be combined with the requirements of an AMO and submitted for acceptance to the Authority, and State of Registry for aircraft not registered in NIGERIA.

Submission and Revision of Policy and Procedure Manuals.

9.2.2.4—(*a*) Each manual required by this part must :

(1) Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety ;

(2) Be in a form that is easy to revise and contains a system which allows personnel to determine the current revision status of each manual ;

(3) Have a date of the last revision on each page concerned ;

` (4) Not be contrary to any applicable Nigeria Civil Aviation regulations and the AOC holder's operations specifications ; and

(5) Each manual will include a reference to appropriate civil aviation regulations.

(*b*) No person may cause the use of any policy and procedure for flight operations or airworthiness function prior to co-ordination with the Authority.

(*c*) Each AOC holder shall submit the proposed policy or procedure to the Authority at least 30 days prior to the date of intended implementation.

Retention of Records

9.2.2.5—(*a*) Each AOC holder shall retain the following records for the period specified in IS: 9.2.2.5.

(1) Flight and duty records.

(2) Flight crew records.

(3) Other AOC holder personnel for which a training programme is required.

(4) Fuel and oil records.

(5) Maintenance records of the aircraft.

(6) Operational flight plan.

(7) Flight Preparation forms listed below —

(*i*) Completed load manifests.

(*ii*) Mass and balance records.

(*iii*) Dispatch releases.

(*iv*) Flight plans.

(*v*) Passenger manifests.

(*vi*) Weather reports.

(8) Aircraft technical logbook, including the following sections listed below—

(*i*) Journey records section.

(*ii*) Maintenance records section.

(9) Flight recorder records.

(10) Quality system records.

(11) Dangerous goods transport document.

(12) Dangerous goods acceptance checklist.

(13) Records on cosmic and solar radiation dosage.

(14) Other records as may be required by the Authority.

(*b*) For the records identified in paragraph (*a*)(1),(2) and (3) above, the AOC holder shall maintain :

(1) Current records which detail the qualifications and training of all its employees, and contract employees, involved in the operational control, flight operations, ground operations and maintenance of the air operator.

(2) Records for those employees performing crew member or flight operations officer duties in sufficient detail to determine whether the employee meets the experience and qualification for duties in commercial air transport operations.

(*c*) Each AOC holder shall maintain records in a manner acceptable to the Authority.

Cockpit Voice and Flight Data Recorder Records.

9.2.2.6—(*a*) Each AOC holder shall retain :

(1) The most recent flight data recorder calibration, including the recording medium from which this calibration is derived ; and

(2) The flight data recorder correlation for one aircraft of any group of aircraft operated by the AOC holder—

(*i*) That are of the same type ;

(*ii*) On which the model flight recorder and its installation are the same ; and

(*iii*) On which there is no difference in type design with respect to the original installation of instruments associated with the recorder.

Note: The flight data recorder calibration and the flight data recorder correlation will be kept as part of the maintenance records for aircraft and its components.

` (*b*) In the event of an accident or incident requiring immediate notification of the Authority, the AOC holder shall remove and keep recorded information from the cockpit voice recorder and flight data recorder for at least 60 days or, if requested by the Authority, for a longer period.

Aircraft Operated by the AOC Holder.

9.2.2.7—(*a*) The AOC holder shall list in its operations specifications the aircraft make, model and series with the following list of authorisations, conditions and limitations :

(1) Issuing authority contact details ;

(2) Operator name and AOC number ;

(3) Date of issue and signature of the Authority representative ;
(4)Aircraft model ;
(5) Types and areas of operations, and
(6)pecial limitations and authorisations.

(*b*) Each AOC holder shall apply to the Authority for an amendment to its operations specification in advance of any intended change of aircraft.

(*c*) Aircraft of another certificate holder operated under an interchange agreement shall be incorporated to the operations specifications as required by paragraph (*a*) above.

Aircraft Technical Log.

9.2.2.8—(*a*) Each AOC holder shall have an aircraft technical log that is carried on the aircraft that contains a journey records section and an aircraft maintenance record section. The journey records section is further described in 9.3.1.5 and the aircraft maintenance record section is further described in 9.4.1.9.

Note: The aircraft technical log may be computerised. The journey records section and the maintenance record section may be combined.

Company Procedures Indoctrination.

9.2.2.9—(*a*) No person may serve nor may any AOC holder use a person in its employ unless that person has completed the company indoctrination curriculum approved by the Authority, appropriate to that person's duties and responsibilities.

(*b*) The indoctrination curriculum shall include training in knowledge and skills related to human performance, including co-ordination with other AOC personnel.

Note: Indoctrination, initial, recurrent, and other training required for crew members and flight operations officers/ dispatchers is contained in Part 8.

Safety Management System.

9.2.2.10—*(a)* An AOC holder shall implement a safety management system acceptable to the Authority as outlined in Nig.CARs Part 20

(*b*) The AOC holder's flight data analysis programme shall be non-punitive and contain adequate safeguards to protect the source(s) of data.

Flight Safety Document System.

9.2.2.11—(*a*) An AOC holder shall establish a flight safety document system, acceptable to the Authority, for the use and guidance of operational personnel as part of its safety management system.

(*b*) The development and organisation of a flight safety document system shall contain the minimum elements of the outline provided in the IS: 9.2.2.11.

9.2.3 AIRCRAFT

Authorised Aircraft.

9.2.3.1—(*a*) No person may operate an aircraft in commercial air transport unless that aircraft has an appropriate current airworthiness certificate, is in an airworthy condition, and meets the applicable airworthiness requirements for these operations, including those related to identification and equipment.

(*b*) No person may operate any specific type of aircraft in commercial air transport until it has completed satisfactory initial certification, which includes the issuance of an AOC listing that type of aircraft.

(*c*) No person may operate additional or replacement aircraft of a type for which it is currently authorised unless it can show that each aircraft has completed an evaluation process for inclusion in the AOC holder's fleet.

Dry Leasing of Foreign Registered Aircraft.

9.2.3.2—Dry Leasing of Foreign Registered Aircraft

(*a*) An AOC holder may dry-lease a foreign aircraft for commercial air transport as authorised by the Authority.

(*b*) No person may be authorised to operate a foreign registered aircraft unless—

(1) There is in existence a current agreement between the Authority and the State of Registry that, while the aircraft is operated by the Nigerian AOC holder, the operations regulations of NIGERIA are applicable ;

(2) There is in existence a current agreement between the Authority and the State of Registry that—

(*i*) While the aircraft is operated by the AOC holder, the airworthiness regulations of the State of Registry are applicable ; or,

(*ii*) If the State of Registry agrees to transfer some or all of the responsibility for airworthiness to the Authority under Article 83 bis of the Chicago Convention, the airworthiness regulations of NIGERIA shall apply to the extent agreed upon by the Authority and the State of Registry.

(*iii*) The agreement acknowledges that the Authority shall have free and uninterrupted access to the aircraft at any place and any time.

(*c*) *See* IS: 9.2.3.2 for additional requirements for dry leasing of foreign-registered aircraft.

Aircraft Interchange

9.2.3.3—(*a*) No person may interchange aircraft with another AOC holder without the approval of the Authority.

(*b*) *See* IS: 9.2.3.3 for requirements pertaining to aircraft interchange agreements approved by the Authority.

Wet-Leasing.

9.2.3.4—(*a*) No holder of an AOC issued under this Part 9 may conduct wet-lease operations on behalf of another air operator (*a wet lease out*) except in accordance with :

(1) the applicable laws and regulations of the country in which the operation occurs ; and

(2) the approval of the Authority for the operation, including any restrictions imposed by the Authority.

(*b*) No holder of an AOC issued under this Part 9 may allow another entity or air operator to conduct wet-lease operations on its behalf (*a wet lease in*) unless—

(1) That air operator holds an AOC or its equivalent from a Contracting State that authorizes those operations ;

(2) The AOC holder advises the Authority of such operations and provides a copy of the AOC under which the operation was conducted ;

(3) Such operation does not exceed a period of 12 months and

(4) The Authority approves the operations.

(*c*) *See* IS: 9.2.3.4 for additional requirements when wet leasing aircraft.

Emergency Evacuation Demonstration

9.2.3.5—(*a*) No person may use an aircraft type and model in commercial air transport passenger-carrying operations unless it has first conducted, for the Authority, an actual full capacity emergency evacuation demonstration for the configuration in 90 seconds or less.

(*b*) The full capacity actual demonstration may not be required, if the AOC holder provides a written petition for deviation with evidence that—

(1) A satisfactory full capacity emergency evacuation for the aircraft to be operated was demonstrated during the aircraft type certification or during the certification of another air operator ; and

(2) There is an engineering analysis, which shows that an evacuation is still possible within the 90-second standard, if the AOC holder's aircraft configuration differs with regard to number of exits or exit type or number of cabin crew members or location of the cabin crew members.

(*c*) If a full capacity demonstration is not required, no person may use an aircraft type and model in commercial air transport passenger-carrying operations unless it has first demonstrated to the Authority that its available personnel, procedures and equipment could provide sufficient open exits for evacuation in 15 seconds or less.

(*d*) No person may use a land plane in extended overwater operations unless it has first demonstrated to the Authority that it has the ability and equipment to efficiently carry out its ditching procedures.

(*e*) *See* IS: 9.2.3.5 for additional requirements concerning emergency evacuation demonstrations.

9.2.3.6.—(*a*) No person may operate an aircraft type in commercial air transport unless it first conducts satisfactory demonstration flights for the Authority in that aircraft type. Demonstration Flights.

(*b*) No person may operate an aircraft in a designated special area, or using a specialised navigation system, unless it conducts a satisfactory demonstration flight for the Authority.

(*c*) Demonstration flights required by paragraph (a) shall be conducted in accordance with the regulations applicable to the type of operation and aircraft type used.

(*d*) The Authority may authorise deviations from this section if the Authority finds that special circumstances make full compliance with this section unnecessary.

(*e*) *Validation Flights :* When an AOC holder applies for a Special Authorisation such as EDTO, RVSM, CAT III, PBN, etc, the final step of the approval process may be a completion of validation flight(s). The Authority shall perform an assessment of the operator on a flight to verify that such an operation and maintenance procedures and practices are used safely and effectively. The validation flight may be accomplished during a revenue flight, post AOC issuance as determined by the Authority.

(*f*) *See* IS: 9.2.3.6 for additional requirements concerning demonstration flights.

9.2.4. FACILITIES AND OPERATIONS SCHEDULES

9.2.4.1.—(*a*) Each AOC holder shall maintain operational and airworthiness support facilities at the main operating base, appropriate for the area and type of operation. Facilities.

(*b*) Each AOC holder shall arrange appropriate ground handling facilities at each airport used to ensure the safe servicing and loading of its flights.

(*c*) Each AOC holder shall not commence a flight unless it has been ascertained by every reasonable means available that the ground and/or water facilities available and directly required on such flight, for the safety operation of the aircraft and the protection of the passengers, are adequate for type of operation under which the flight is to be conducted and are adequately operated for this purpose.

(*d*) Each AOC holder shall ensure that any inadequacy of facilities observed in the course of operations is reported to the authority responsible without delay.

(*e*) Each AOC holder shall, as part of its safety management system, asses the level or rescue and fire fighting service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aircraft intended to be used.

(*f*) Each AOC holder shall include in its operations manual information related to the level of RFFS protection that is deemed acceptable.

9.2.4.2.— (*a*) In establishing flight operations schedules, each AOC holder conducting scheduled operations shall allow enough time for the proper servicing of aircraft at intermediate stops, and shall consider the prevailing winds en route and cruising speed for the type of aircraft. This cruising speed may not be more than that resulting from the specified cruising output of the engines.

9.3. AOC FLIGHT OPERATIONS MANAGEMENT

Applicability.

9.3.1.1—(*a*) Subpart 9.3 provides those certification requirements that apply to management of flight operations personnel and their functions.

Operations Manual.

9.3.1.2.—(*a*) Each AOC holder shall issue to the crewmembers and persons assigned operational control functions, an Operations Manual acceptable to the Authority.

(*b*) The Operations Manual shall contain the overall (general) company policies and procedures regarding the flight operations it conducts.

(*c*) Each AOC holder shall prepare and keep current an Operations Manual which contains the AOC procedures and policies for the use and guidance of its personnel.

(*d*) Each AOC holder shall issue the Operations Manual, or pertinent portions, together with all amendments and revisions to all personnel that are required to use it.

(*e*) No person may provide for use of its personnel in commercial air transport any Operations Manual or portion of this manual which has not been reviewed and found acceptable or approved for the AOC holder by the Authority.

(*f*)Each AOC holder shall ensure that the contents of the Operations Manual includes at least those subjects designated by the Authority that are applicable to the AOC holder's operations.

(*g*) Unless otherwise acceptable to the Authority, each AOC holder shall provide an Operations Manual containing information on operations administration and supervision, accident prevention and flight safety programmes, personnel training, flight crew and cabin crew member fatigue and flight and duty time limitations, flight operations including operational flight planning, aeroplane performance, routes, guides and charts, minimum flight altitudes, aerodrome operating minima, search and rescue, dangerous goods, navigation, communications, security, and human factors. The operations manual shall encompass the matters set forth above. The operations manual may be published in parts, as a single document, or as a series of volumes. Specific subjects are listed below. Subjects presented with reference to a specific section shall be addressed in accordance with the requirements of the referenced section.

(1) Aircraft Operating Manual. (9.3.1.4)

(2) Minimum Equipment List and Configuration Deviation List. (9.3.1.12)

(3) Training Programme. (9.3.1.3)

(4) Aircraft Performance Planning Manual. (9.3.1.13)

(5) Route Guide. (9.3.1.20)

(6) Dangerous Goods Procedures.

(7) Accident Reporting Procedures.

(8) Security Procedures.

(9) Aircraft Loading and Handling Manual. (9.3.1.15)

(10) Cabin Crew Member Manual (*if required*). (9.3.1.17)

(*i*) The Operations Manual shall conform to the outline contained in IS : 9.3.1.2.

(*h*) An operator shall develop policies and procedures for third parties that perform work on its behalf"

Training Programme.

9.3.1.3.—(*a*) Each AOC holder shall ensure that all operations personnel are properly instructed in their duties and responsibilities and the relationship of such duties to the operation as a whole.

(*b*) Each AOC holder shall have a training programme manual approved by the Authority containing the general training, checking, and record keeping policies.

(*c*) Each AOC holder shall have approval of the Authority prior to using a training curriculum for the purpose of qualifying a crewmember, or person performing operational control functions, for duties in commercial air transport.

(*d*) Each AOC holder shall submit to the Authority any revision to an approved training programme, and shall receive written approval from the Authority before that revision can be used.

(*e*) The training programme manual shall conform to the outline in IS : 9.3.1.3

Aircraft Operating Manual.

9.3.1.4.— (*a*) Each AOC holder or applicant shall submit proposed aircraft operating manuals for each type and variant of aircraft operated, containing the normal, abnormal and emergency procedures relating to the operation of the aircraft for approval by the Authority.

(*b*) Each Aircraft Operating Manual shall be based upon the aircraft manufacturer's data for the specific aircraft type and variant operated by the AOC holder and shall include specific operating parameters, details of the aircraft systems, and of the check lists to be used applicable to the operations of the AOC that are approved by the Authority. The design of the manual shall observe human factors principles.

(*c*) The Aircraft Operating Manual shall be issued to the flight crewmembers and persons assigned operational control functions to each aircraft operated by the AOC.

(*d*) The Aircraft Operating Manual may conform to the outline contained in IS: 9.3.1.4.

Aircraft Technical Log Entries – Journey Records Section.

9.3.1.5.—(*a*) Each AOC holder shall use an aircraft technical log containing a journey records section which includes the following information for each flight: (See 9.4.1.9 for maintenance records section of the aircraft technical log).

(1) Aircraft nationality and registration ;
(2) Date ;
(3) Names of crewmembers ;
(4) Duty assignments of crewmembers ;
(5) Place of departure ;
(6) Place of arrival ;
(7) Time of departure ;
(8) Time of arrival ;
(9) Hours of flight ;
(10) Nature of flight (private, aerial work, scheduled, non-scheduled) ;
(11) Incidents, observations, if any ; and
(12) Signature of person in charge.

(*b*) Entries in the journey logbook shall be made currently and in ink or indelible pencil.

(*c*) Completed journey log books shall be retained to provide a continuous record of the last 2 years operations.

9.3.1.6.—(*a*) The AOC holder shall, for each commercial air transport operation, designate in writing one pilot as the PIC. Designation of PIC for Commercial Air Transport.

9.3.1.7.—(*a*) The AOC holder shall schedule, and the PIC shall ensure, that the minimum number of required cabin crew members are on board passenger-carrying flights. Required Cabin Crew Members.

(*b*) The number of cabin crew members may not be less than the minimum prescribed by the Authority in the AOC holder's operations specifications or the following, whichever is greater—

(*c*) For a seating capacity of 20 to 50 passengers: 1 cabin crew member; and

(*d*) One additional cabin crew member for each unit, or part of a unit, of 50 passenger seat capacity.

(*e*) When passengers are on board a parked aircraft, the minimum number of flight attendants shall be one-half that required for the flight operation, but never less than one cabin crew member (or another person qualified in the emergency evacuation procedures for the aircraft).

9.3.1.8.—(*a*) No AOC holder may allow the transportation of special situation passengers except— Carriage of Special Situation Passengers.

(*b*)n As provided in the AOC holder's Operations Manual procedures ; and

(*c*) With the knowledge and concurrence of the PIC.

9.3.1.9—(*a*) Each AOC holder shall have a programme of checking and standardisation of crew members approved by the Authority. Crew Member Checking and Standardisation Programme.

(*b*) An AOC holder shall check pilots' proficiency on those manoeuvres and procedures that are prescribed by the Authority for pilot proficiency checks, which shall include emergency procedures and, where applicable, instrument flight rules.

9.3.1.10 RESERVED

9.3.1.11—(*a*) Each AOC holder shall issue to the flight crews and make available on each aircraft, the checklist procedures approved by the Authority appropriate to for the type and variant of aircraft. Cockpit Check Procedure.

(*b*) Each AOC holder shall ensure that approved procedures include each item necessary for flight crew members to check for safety before starting engines, taking off, or landing, and for engine and systems abnormalities and emergencies.

(*c*) Each AOC holder shall ensure that the checklist procedures are designed so that a flight crew member will not need to rely upon his memory for items to be checked.

(*d*) Each AOC holder shall make the approved procedures readily useable in the cockpit of each aircraft and the flight crew shall be required to follow them when operating the aircraft.

Minimum Equipment List and Configuration Deviation List.

9.3.1.12—(*a*) Each AOC holder shall provide for the use of the flight crew members, maintenance personnel and persons assigned operational control functions during the performance of their duties, an MEL approved by the Authority.

(*b*) The MEL shall be specific to the aircraft type and variant which contains the circumstances, limitations and procedures for release or continuance of flight of the aircraft with inoperative components, equipment or instruments.

(*c*) Each AOC holder may provide for the use of flight crew members, maintenance personnel and persons assigned operational control functions during the performance of their duties a Configuration Deviation List (CDL) specific to the aircraft type if one is provided and approved by the State of Design. An AOC Holder operations manual shall contain those procedures acceptable to the Authority for operations in accordance with the CDL requirements.

Performance Planning Manual.

9.3.1.13—(*a*) Each AOC holder shall provide for the use of the flight crew members and persons assigned operational control functions during the performance of their duties, a performance planning manual acceptable to the Authority.

(*b*) The performance planning manual shall be specific to the aircraft type and variant and shall contain adequate performance information to accurately calculate the performance in all normal phases of flight operation.

Performance Data Control System.

9.3.1.14—(*a*) Each AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current performance data for each aircraft, route and airport that it uses.

(*b*) The system approved by the Authority shall provide current obstacle data for departure and arrival performance calculations.

9.3.1.15— (*a*) Each AOC holder shall provide for the use of the flight crew members, ground handling personnel and persons assigned operational control functions during the performance of their duties, an aircraft handling and loading manual acceptable to the Authority.

(*b*) This manual shall be specific to the aircraft type and variant and shall contain the procedures and limitations for servicing and loading of the aircraft.

Mass and Balance Data Control System.

9.3.1.16—(*a*) Each AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current information regarding the mass and balance of each aircraft operated.

Cabin Crew Member Manual.

9.3.1.17—(*a*) The AOC holder shall issue to the cabin crew members and provide to passenger agents during the performance of their duties, a cabin crew member manual acceptable to the Authority.

(*b*) The cabin crew member manual shall contain those operational policies and procedures applicable to cabin crew members and the carriage of passengers.

(*c*) The AOC holder shall issue to the cabin crew members, a manual specific to the aircraft type and variant which contains the details of their normal, abnormal and emergency procedures and the location and operation of emergency equipment.

Passenger Briefing Cards.

9.3.1.18—(*a*) Each AOC holder shall carry on each passenger carrying aircraft, in convenient locations for the use of each passenger, printed cards supplementing the oral briefing and containing—

(1) Diagrams and methods of operating the emergency exits ;

(2) Other instructions necessary for use of the emergency equipment, and

(3) Information regarding the restrictions and requirements associated with sitting in an exit seat row.

(*b*) Each AOC holder shall ensure that each card contains information that is pertinent only to the type and variant of aircraft used for that flight.

(*c*) *See* IS: 9.3.1.18 for specific information to be included on passenger information cards regarding exit row seating.

Aeronautical Data Control System.

9.3.1.19—(*a*) Each AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current aeronautical data for each route and aerodrome that it uses.

(*b*) *See* IS: 9.3.1.19 for the specific aerodrome information to be contained in the aeronautical data control system.

Route Guide - Areas, Routes and Aerodromes.

9.3.1.20—(*a*) Each AOC holder shall provide for the use of the flight crew members and persons assigned operational control functions during the performance of their duties, a route guide and aeronautical charts approved by the Authority.

(*b*) The AOC holder shall keep the route guide and aeronautical charts current and appropriate for the proposed types and areas of operations to be conducted by the AOC holder. This information is issued as part of the operations manual or maybe separate.

(*c*) This information shall contain at least the information outlined in IS : 9.3.1.20.

Weather Reporting Sources.

9.3.1.21—(*a*) Each AOC holder shall use sources approved the Authority for the weather reports and forecasts used for decisions regarding flight preparation, routing and terminal operations.

(*b*) For passenger carrying operations, the AOC holder shall have an approved system for obtaining forecasts and reports of adverse weather phenomena that may affect safety of flight on each route to be flown and airport to be used.

(*c*) *See* IS: 9.3.1.21 for sources of weather reports satisfactory for flight planning or controlling flight movement.

Deicing and Anti-icing Programme.

9.3.1.22—(*a*) Each AOC holder planning to operate an aircraft in conditions where frost, ice, or snow may reasonably be expected to adhere to the aircraft shall—

(1) Use only aircraft adequately equipped for such conditions ;

(2) Ensure flight crew is adequately trained for such conditions ; and

(3) Have an approved ground deicing and anti-icing programme.

(*b*) See IS: 9.3.1.22 for detailed requirements pertaining to the AOC holder's deicing programme.

Flight Supervision and Monitoring System.

9.3.1.23—(*a*) Each AOC holder shall have an adequate system approved by the Authority for proper dispatch and monitoring of the progress of the flights.

(*b*) The dispatch and monitoring system shall have enough dispatch centres, adequate for the operations to be conducted, located at points necessary to ensure adequate flight preparation, dispatch and in-flight contact with the flight operations.

(*c*) Each AOC holder shall provide enough qualified flight operations officers at each dispatch centre to ensure proper operational control of each flight.

(*d*) See IS: 9.3.1.23 for detailed requirements pertaining to the AOC holder's flight monitoring system.

Managing Fatigue-Related Safety Risks.

9.3.1.24—(*a*) For the purpose of managing fatigue-related safety risks, an AOC holder shall establish either :

(1) flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management regulations in 8.12 ; or

(2) a Fatigue Risk Management System (FRMS) in compliance with 8.11.1.2(e) ; or

(3) an FRMS in compliance with 8.11.1.2(e) for part of its operations and the requirements of 8.12 for the remainder of its operations.

(*b*) Where the operator adopts prescriptive fatigue management regulations for part or all of its operations, the Authority may approve, in exceptional circumstances, variations to these regulations on the basis of a risk assessment provided by the operator. Approved variations shall provide a level of safety equivalent to, or better than, that achieved through the prescriptive fatigue management regulations.

(*c*) The Authority shall approve an operator's FRMS before it may take the place of any or all of the prescriptive fatigue management regulations. An approved FRMS shall provide a level of safety equivalent to, or better than, the prescriptive fatigue management regulations.

(*d*) Operators using an FRMS must adhere to the following provisions of the FRMS approval process that allows the Authority to ensure that the approved FRMS meets the requirements of 8.11.1.2(*c*).

(1) Establish maximum values for flight times and/or flight duty period(s) and duty period(s), and minimum values for rest periods that shall be based upon scientific principles and knowledge, subject to safety assurance processes.

(2) Adhere to the Authority mandates to decrease maximum values and increase in minimum values in the event that the operator's data indicates these values are too high to too low, respectively ; and

(3) Provide justification to the Authority for any increase in maximum values or decrease in minimum values based on accumulated FRMS experience and fatigue-related data before such changes will be approved by the Authority.

(*e*) Operators implementing an FRMS to manage fatigue-related safety risks shall, as a minimum :

(1) Incorporate scientific principles and knowledge within the FRMS;

(2) Identify fatigue-related safety hazards and the resulting risks on an ongoing basis ;

(3) Ensure that the remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly ;

(4) Provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions ; and

(5) Provide for continuous improvement to the overall performance of the FRMS.

(*f*) *See* detailed IS: 9. 3.1.24 requirements pertaining to FRMS.

Communications Facilities.

9.3.1.25—(*a*) Each AOC holder's flights shall be able to have two-way radio communications with all ATC facilities along the routes and alternate routes to be used.

(*b*) For passenger carrying operations, each AOC holder shall be able to have rapid and reliable radio communications with all flights over the AOC's entire route structure under normal operating conditions. This radio communication system shall be independent from the ATC system.

(*c*) Each AOC holder engaged in international air navigation shall at all times have available for immediate communication to rescue coordination centres, information on the emergency and survival equipment carried on board any of their aeroplanes including, as applicable —

(1) The number, colour and types of life rafts and pyrotechnics ;

(2) Details of emergency water and medical supplies ; and

(3) The type and frequencies of the emergency portable radio equipment.

Routes and Areas of Operations.

9.3.1.26—(*a*) An AOC holder may conduct operations only along such routes and within such areas for which—

(1) Ground facilities and services, including meteorological services, are provided which are adequate for the planned operation ;

(2) The performance of the aircraft intended to be used is adequate to comply with minimum flight altitude requirements ;

(3) The equipment of the aircraft intended to be used meets the minimum requirements for the planned operation ;

(4) Appropriate and current maps and charts are available;

(5) If two-engine aircraft are used, adequate airports are available within the time/distance limitations ; and

(6) If single-engine aircraft are used, surfaces are available which permit a safe forced landing to be executed.

(*b*) No person may conduct commercial air transport operations on any route or area of operation unless those operations are in accordance with any restrictions imposed by the Authority.

9.3.1.27—(*a*) Each AOC holder shall ensure, for each proposed route or area, that the navigational systems and facilities it uses are capable of navigating the aircraft— Navigation Accuracy.

(*b*) Within the degree of accuracy required for ATC ; and

(*c*) To the airports in the operational flight plan within the degree of accuracy necessary for the operation involved.

(*d*) In situations without adequate navigation systems reference, the Authority may authorise day VFR operations that can be conducted safely by pilotage because of the characteristics of the terrain.

(*e*) Except for those navigational aids required for routes to alternate airports, the Authority will list in the AOC holder's operations specifications nonvisual ground aids required for approval of routes outside of controlled airspace.

(*f*) Non-visual ground aids are not required for night VFR operations on routes that the certificate holder shows have reliably lighted landmarks adequate for safe operation.

(*g*) Operations on route segments where the use of celestial or other specialised means of navigation is required shall be approved by the Authority.

9.4 AOC MAINTENANCE REQUIREMENTS

9.4.1.1—(*a*) This Subpart provides those certification and maintenance requirements that apply to an AOC holder utilising an AMO or an equivalent system. Applicability.

9.4.1.2—(*a*) Each AOC holder shall ensure the airworthiness of the aircraft and the serviceability of both operational and emergency equipment by— Maintenance Responsibility

(1) Assuring the accomplishment of preflight inspections ;

(2) Assuring the correction of any defect and/or damage affecting safe operation of an aircraft to an approved standard, taking into account the MEL and CDL if available for the aircraft type ;

(3) Assuring the accomplishment of all maintenance in accordance with the approved operator's aircraft maintenance programme ;

(4) The analysis of the effectiveness of the AOC holder's approved aircraft maintenance programme ;

(5) Assuring the accomplishment of any operational directive, airworthiness directive and any other continued airworthiness requirement made mandatory by the Authority ; and

(6) Assuring the accomplishment of modifications in accordance with an approved standard and, for non-mandatory modifications, the establishment of an embodiment policy.

(*b*) Each AOC holder shall ensure that the Certificate of Airworthiness for each aircraft operated remains valid in respect to—

(1) The requirements in paragraph (*a*) ;

(2) The expiration date of the Certificate ; and

(3) Any other maintenance condition specified in the Certificate.

(*c*) Each AOC holder shall ensure that the requirements specified in paragraph (a) are performed in accordance with procedures approved by or acceptable to the Authority.

(*d*) Each AOC holder shall ensure that the maintenance, preventive maintenance, and modification of its aircraft/aeronautical products are performed in accordance with its maintenance control manual and/or current instructions for continued airworthiness, and applicable aviation regulations.

(*e*) Each AOC holder may make an arrangement with another person or entity for the performance of any maintenance, preventive maintenance, or modifications ; but shall remain responsible of all work performed under such arrangement.

(*f*) Each AOC holder shall have its aircraft maintained and released to service by either an AMO certificated under Part 6 of these regulations or by an equivalent system. If an equivalent system to an AMO is used, the AOC holder shall ensure that the person signing the maintenance release is licensed in accordance with Part 2 of these regulations.

Approval and Acceptance of AOC Maintenance Systems.

9.4.1.3—(*a*) An AOC holder shall not operate an aircraft, except for pre-flight inspections, unless it is maintained and released to service by an AMO or equivalent system of maintenance that is approved by the State of Registry and is acceptable to the Authority.

(*b*) For aircraft registered in Nigeria, an AMO or an equivalent system of maintenance shall be approved by the Authority.

(*c*) For aircraft not registered in Nigeria, an AMO or an equivalent system of maintenance shall be approved by the State of Registry of the aircraft, and such approval will be accepted by the Authority.

(*d*) When the Authority or the State of Registry accepts an equivalent system of maintenance, the persons designated to sign a maintenance release or airworthiness release shall be licensed in accordance with Part 2 of these regulations, as appropriate.

Maintenance Control Manual.

9.4.1.4—(*a*) Each Nigerian AOC holder shall provide to the Authority, and to the State of Registry of the aircraft, if different from the Authority, an AOC holder's maintenance control manual and subsequent amendments, for the use and guidance of maintenance and operational personnel concerned, containing details of the organisation's structure including :

(1) The accountable manager and designated person(s) responsible for the maintenance system as required by 9.2.2.2.

(2) Procedures to be followed to satisfy the maintenance responsibility of 9.4.1.2, except where the AOC holder is an AMO, and has the quality functions of 9.2.2.3. Such procedures may be included in the AMO procedures manual.

(3) Procedures for the reporting of failures, malfunctions, and defects in accordance with 5.5.1.5, to the Authority, State of Registry and the State of Design within 72 hours of discovery; in addition, items that warrant immediate notification to the Authority by telephone/telex/fax, with a written follow-on report as soon as possible but no later than within 72 hours of discovery, are—

(*i*) Primary structural failure ;
(*ii*) Control system failure ;
(*iii*) Fire in the aircraft ;
(*iv*) Engine structure failure ; or
(*v*) Any other condition considered an imminent hazard to safety.

(4) The design of the maintenance control manual shall observe Human Factors principles.

(*b*) The AOC holder's maintenance control manual shall contain the following information which may be issued in separate parts—

(1) A description of the administrative agreements between the AOC holder and the AMO, or a description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an AMO ;

(2) A description of the procedures to ensure each aircraft they operate is in an airworthy condition ;

(3) A description of the procedures to ensure the emergency equipment for each flight is serviceable ;

(4)The names and duties of the person or persons required to ensure that all maintenance is carried out in accordance with the maintenance control manual ;

(5) A reference to the maintenance programme required in 9.4.1.12 ;

(6) A description of the methods for completion and retention of the operator's maintenance records required by 9.4.1.8 ;

(7) A description of the procedures for monitoring, assessing and reporting maintenance and operational experience for all aircraft over 5,700 kg maximum certificated take-off mass ;

(8) A description of the procedures for obtaining and assessing continued airworthiness information and implementing any resulting actions considered necessary by the State of Registry for all aircraft over 5,700 kg maximum certificated take-off mass, from the organisation responsible for the type design, ;

(9) A description of the procedures for implementing mandatory continuing airworthiness as required in 9.4.1.2(a)(5) ;

(10) A description of the procedures establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme in order to correct any deficiency in that programme ;

(11) A description of aircraft types and models to which the manual applies ;

(12) A description of the procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified ; and

(13) A description of the procedures for advising the State of Registry of significant in-service occurrences.

(*c*) No person may provide for use of its personnel in commercial air transport any Maintenance Control Manual or portion of this manual which has not been reviewed and approved for the AOC holder by the Authority. Copies of all amendments to the operator's maintenance control manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

(*d*) *See* IS: 9.4.1.4 for an outline of specific subjects to be contained as appropriate in the AOC holder's maintenance control manual.

Maintenance Managemernt.

9.4.1.5—(*a*) The AOC holder, approved as an AMO, may carry out the requirements specified in 9.4.1.2 (a)(2),(3),(5)and (6).

(*b*) If the AOC holder is not an AMO, the AOC holder shall meet its responsibilities under in 9.4.1.2 (a)(2),(3),(5)and (6) by using —

(1) An equivalent system of maintenance approved or accepted by the Authority ; or

(2) Through an arrangement with an AMO with a written maintenance contract agreed between the AOC holder and the contracting AMO detailing the required maintenance functions and defining the support of the quality functions approved or accepted by the Authority.

(*c*) Each AOC holder shall employ a person or group of persons, acceptable to the Authority, to ensure that all maintenance is carried out to an approved standard such that the maintenance requirements of 9.4.1.2 and requirements of the AOC holder's maintenance control manual are satisfied, and to ensure the functioning of the quality system.

(*d*) Each AOC holder shall provide suitable office accommodation at appropriate locations for the personnel specified in paragraph (*c*).

(*e*) Each AOC holder shall establish a safety management system for the maintenance of aircraft that is accordance with the provisions of Part 20 of these regulations and that is acceptable to the authority.

9.4.1.6—Reserved

9.4.1.7—Reserved

Maintenance Records.

9.4.1.8—(*a*) Each AOC holder shall ensure that a system has been established to keep, in a form acceptable to the Authority, the following records :

(1) The total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life-limited components ;

(2) The current status of compliance with all mandatory continuing airworthiness information ;

(3) Appropriate details of modifications and repairs to the aircraft and its major components ;

(4) The time in service (hours, calendar time and cycles, as appropriate) since last overhaul of the aircraft or its components subject to mandatory overhaul life ;

(5) The current aircraft status of compliance with the maintenance programme ; and

(6) The detailed maintenance records to show that all requirements for signing of a maintenance release and airworthiness release have been met.

(*b*) Each AOC holder shall ensure that items in (a)(1-5) shall be kept for a minimum of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in (a)(6) shall be kept for a minimum of 1 year after the signing of the maintenance release and/or airworthiness release.

(*c*) Each AOC holder shall ensure that in the event of temporary change of operator, the records specified in paragraph (a) shall be made available to the new operator.

(*d*) Each AOC holder shall ensure that when an aircraft is permanently transferred from one operator to another operator, the records specified in paragraph (a) are also transferred.

(*e*) An operator shall ensure that the following records are kept: in respect of the entire helicopter :

(1) The total time in service ;

(2) In respect of the major components of the helicopter :

(*i*) the total time in service ;

(*ii*) the date of the last overhaul ;

(*iii*) the date of the last inspection ;

(3) In respect of those instruments and equipment, the serviceability and operating life of which are determined by their time in service :

(*i*) such records of the time in service as are necessary to determine their serviceability or to compute their operating life ;

(*ii*) the date of the last inspection.

Aircraft Technical Log Entries—Maintenance Record Section.

9.4.1.9—(*a***)** Each AOC holder shall use an aircraft technical log which includes an aircraft maintenance record section containing the following information for each aircraft :

(1) Information about each previous flight necessary to ensure continued flight safety.

(2) The current aircraft maintenance release and/or an airworthiness release.

(3) The current inspection status of the aircraft, to include inspections due to be performed on an established schedule and inspections that are due to be performed that are not on an established schedule, except that the Authority may agree to the maintenance statement being kept elsewhere.

(4) The current maintenance status of the aircraft, to include maintenance due to be performed on an established schedule and maintenance that is due to be performed that is not on an established schedule except that the Authority may agree to the maintenance statement being kept elsewhere.

(5) All deferred defects that affect the operation of the aircraft.

(*b*) The aircraft technical log and any subsequent amendment shall be approved by the Authority.

(*c*) Each person who takes action in the case of a reported or observed failure or malfunction of an aircraft/ aeronautical product, that is critical to the safety of flight shall make, or have made, a record of that action in the maintenance section of the aircraft technical log.

(*d*) Each AOC holder shall have a procedure for keeping adequate copies of required records to be carried aboard, in a place readily accessible to each flight crewmember and shall put that procedure in the AOC holder's operations manual.

Release to Service.

9.4.1.10.— (*a*) No AOC holder shall operate an aircraft unless it has both a maintenance release, if maintenance has been performed prior to the flight, and a valid airworthiness release, as follows :

(1) Maintenance Release :

(*i*) An AOC holder shall not operate an aircraft unless it is maintained and released to service by an organisation approved in accordance with Part 6 of these regulations, or under an equivalent system, either of which shall be acceptable to or approved by the State of Registry.

(*ii*) An AOC holder using an AMO shall not operate an aircraft after release under subparagraph (i) unless a Certificate of Release to Service has been prepared in accordance with the AOC maintenance control manual procedures and a logbook entry in the maintenance records section of the aircraft technical log has been made.

(*iii*) An AOC holder using an equivalent system shall not operate an aircraft after release under subparagraph (i) unless a logbook entry in the maintenance records section of the aircraft technical log is prepared or caused to be prepared by an appropriately licensed and rated individual in accordance with Part 2 of these regulations, as appropriate. This maintenance release shall be made in accordance with the AOC maintenance control manual procedures.

(*iv*) The AOC holder shall ensure that the PIC of the aircraft has reviewed the maintenance section of the aircraft technical log and determined that any maintenance performed has been appropriately documented.

(2) Airworthiness Release

(*i*) An AOC holder shall not operate an aircraft unless the PIC is in possession of a valid airworthiness release to indicate that any maintenance, preventative maintenance or inspections performed on the aircraft have been satisfactorily performed and appropriately documented.

Modification and Repairs.

9.4.1.11—(*a*) All modifications and repairs shall comply with airworthiness requirements acceptable to the State of Registry. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained. However, in the case of a major repair or major modification, the work must have been done in accordance with technical data approved by the Authority.

(*b*) An AOC holder may be authorised to perform maintenance, preventive maintenance, and modifications of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, under the AOC provided :

(1) It is performed under a maintenance system, acceptable to the State of Registry, that is equivalent to that of an Approved Maintenance Organisation (AMO) established in accordance with Part 6 of these regulations, and

(2) It is performed in accordance with the approved AOC's operations specifications.

(*c*) An AOC holder using a maintenance system acceptable to the State of Registry and equivalent to that of an AMO that wishes to approve for return to service major repairs or major modifications to an aircraft registered in Nigeria shall use a current and valid licensed AME with an airframe and powerplant rating and shall be qualified in accordance with Part 2 of these regulations.

(*d*) Each AOC holder shall, promptly upon its completion, prepare a report of each major modification or major repair of an airframe, aircraft engine, propeller, or appliance of an aircraft that it operates.

(*e*) The AOC holder shall submit a copy of each report of a major modification to the Authority, and shall keep a copy of each report of a major repair available for inspection.

(*f*) The Authority issuing an approval for the design of a modification, of a repair or of a replacement part shall do so on the basis of satisfactory evidence that the aircraft is in compliance with airworthiness requirements used for the issuance of the Type Certificate, its amendments or later requirements when determined by the State.

Aircraft Mainte-nance Programme.

9.4.1.12—(*a*) Each AOC holder's aircraft maintenance programme and any subsequent amendment shall be submitted to the State of Registry for approval. Acceptance by the Authority will be conditioned upon prior approval by the State of Registry, or where appropriate, upon the AOC holder complying with recommendations provided by the State of Registry.

(*b*) The Authority will require an operator to include a reliability programme when the Authority determines that such a reliability programme is necessary. When such a determination is made by the Authority the AOC holder shall provide such procedures and information in the AOC holder's maintenance control manual.

(*c*) Each AOC holder shall ensure that each aircraft is maintained in accordance with the AOC holder's approved maintenance programme which shall include—

(1) Maintenance tasks and the intervals in which these are to be performed, taking into account the anticipated utilisation of the aircraft ;

(2) When applicable, a continuing structural integrity programme ;

(3) Procedures for changing or deviating from subparagraphs (*c*)(1) and (*c*)(2) ; and

(4) When applicable, condition monitoring and reliability programme for aircraft systems, components, and powerplants.

(*d*) Repetitive maintenance tasks that are specified in mandatory intervals as a condition of approval of the type design shall be identified as such.

(*e*) No person may provide for use of its personnel in commercial air transport a Maintenance Programme or portion thereof which has not been reviewed and approved for the AOC holder by the Authority. The design and application of the operator's maintenance programme shall observe Human Factors principles.

(*f*)Approval by the Authority of an AOC holder's maintenance programme and any subsequent amendments shall be noted in the AOC certificate pursuant to 9.1.1.7(b)(6) of these regulations.

(*g*) Each AOC holder shall have an inspection programme and a programme covering other maintenance, preventive maintenance, and modifications to ensure that—

(1) Maintenance, preventive maintenance, and modifications performed by it, or by other persons, are performed in accordance with the AOC holder's maintenance control manual ;

(2) Each aircraft released to service is airworthy and has been properly maintained for operation.

(*h*) The Authority may amend any specifications issued to an AOC holder to permit deviation from those provisions of this Subpart that would prevent the return to service and use of airframe components, powerplants, appliances, and spare parts thereof because those items have been maintained, altered, or inspected by persons employed outside Nigeria who do not hold a Nigerian AME licence. Each AOC holder who is granted authority under this deviation shall provide for surveillance of facilities and practices to assure that all work performed on these parts is accomplished in accordance with the AOC holder's maintenance control manual.

(*i*)Copies of all amendments to the AOC holder's maintenance programme shall be furnished promptly to all organizations or persons to whom the maintenance programme has been issued.

(*j*) The maintenance programme shall be based on maintenance programme information made available by the State of Design or by the organisation responsible for the type design, and any additional applicable experience.

Reliability Programme.

9.4.1.13.—(*a*) A maintenance programme for each aircraft shall contain when applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and powerplants.

(*b*) Reliability programmes shall be developed for aircraft maintenance programmes based upon maintenance steering groups (MSG) logic or those that include condition monitored components or that does not contain overhaul time periods for all significant system components.

(*c*) Reliability programmes need not be developed for aircraft not considered as large aircraft or that contain overhaul time periods for all significant aircraft system components.

(*d*) The purpose of a reliability programme is to ensure that the aircraft maintenance programme tasks are effective and their periodicity is adequate.

(*e*) The reliability programme may result in the escalation or deletion of maintenance tasks, as well as de-escalation or addition of maintenance tasks.

(*f*) A reliability programme provides an appropriate means of monitoring the effectiveness of the maintenance programme.

Authority to Perform and Approve Maintenance, Preventive Maintenance, and Modifications.

9.4.1.14.—(*a*) An AOC holder which is not approved as an AMO may perform and approve maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or a part thereof for return to service, if approved in the operations specifications, as provided in its maintenance programme and maintenance control manual.

(*b*) An AOC holder may make arrangements with an AMO (appropriately rated) for the performance of maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof as provided in its maintenance programme and maintenance control manual.

(*c*) An AOC holder which is not approved as an AMO shall use an appropriately licensed and rated individual in accordance with Part 2 of these regulations, as appropriate, to approve maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, or appliance for return to service after performing or supervising in accordance with technical data approved by the Authority.

Licence Requirements for an AIRCRAFT MAINTENANCE ENGINEER—AOC Holder Using Equivalent System.

9.4.1.15—(*a*) Each person who is directly in charge of maintenance, preventive maintenance, or modification, of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof and each person performing required inspections and approving for return to service the maintenance performed shall be an appropriately licensed and rated aircraft maintenance engineer or repair specialist in accordance with Part 2 of these regulations, as appropriate, and acceptable to the Authority.

(*b*) A person who is directly in charge shall be on site but need not physically observe and direct each worker constantly, but shall be available for consultation and decision on matters requiring instruction or decision from higher authority than that of the persons performing the work.

(c) For purposes of this section, a person "directly in charge" is each person assigned to a position in which he is responsible for the work of a shop or station that performs maintenance, preventive maintenance, modifications, or other functions affecting aircraft airworthiness.

Rest and Duty Limitations for Persons Performing Maintenance Functions on AOC Holder Aircraft.

9.4.1.16—(*a*) No person may assign, nor shall any person perform maintenance functions for aircraft certified for commercial air transport, unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.

(*b*) No person may schedule a person performing maintenance functions for aircraft certified for commercial air transport for more than 12 consecutive hours of duty.

(*c*) In situations involving unscheduled aircraft unserviceability, persons performing maintenance functions for aircraft certified for commercial air transport may be continued on duty for—

(1) Up to 16 consecutive hours ; or

(2) 20 hours in 24 consecutive hours.

(*d*) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(*e*) The AOC holder shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive day periods.

Ageing Aircraft Airworthiness And Safety Improvements.

9.4.1.17—(*a*) This sub-section requires persons holding an air operator certificate under part 9 of these regulations to support the continued airworthiness of each airplane. These requirements may include, but are not limited to, revising the maintenance program required by 9.4.1.12 of this part, incorporating design changes, and incorporating revisions to Instructions for Continued Airworthiness.

(*b*) All AOC holder shall comply with the ageing airplane inspections and records reviews requirements as contained in IS 9.4.1.17(*b*).

(*c*) All AOC holder shall comply with the repair assessment for pressurized fuselage requirements as contained in IS 9.4.1.17(*c*)

(*d*) All AOC holder shall comply with the supplemental inspections requirements as contained in IS 9.4.1.17(*d*).

(*e*) All AOC holder shall comply with the Electrical wiring interconnection systems (EWIS) maintenance program requirements as contained in IS 9.4.1.17(*e*)

(*f*) All AOC holder shall comply with the Fuel tank system maintenance program requirements as contained in IS 9.4.1.17(*f*).

(*g*) All AOC holder shall comply with the Limit of validity requirements as contained in IS 9.4.1.17(*g*)

(*h*) All AOC holder shall comply with the Flammability reduction means requirements as contained in IS 9.4.1.17(*h*)

9.5 AOC SECURITY MANAGEMENT

Applicability.

9.5.1.1—(*a*) Subpart 9.5 provides those certification requirements that apply to the AOC holder's protection of aircraft, facilities and personnel from unlawful interference.

Security Requirements.

9.5.1.2—(*a*) Each AOC holder shall ensure that all appropriate personnel are familiar, and comply with, the relevant requirements of the national security programmes of Nigeria.

Security Training Programmes.

9.5.1.3—(*a*) Each AOC holder shall establish, maintain and conduct approved training programmes which enable the operator's personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or unlawful seizure of aircraft and to minimise the consequences of such events should they occur.

(*b*) As a minimum, the security training programme shall include :

(1) Determination of the seriousness of any occurrence ;

(2) Crew communication and coordination ;

(3) Appropriate self-defence responses ;

(4) Use of non-lethal protective devices assigned to crew members whose use is authorised by the Authority ;

(5) Live situational training exercises regarding various threat conditions;

(6) Flight deck procedures to protect the aircraft ;

(7) Aircraft search procedures and guidance on least-risk bomb locations where practicable ;

(8) Understanding of behaviour of terrorists so as to facilitate the ability of crewmembers to cope with hijacker behaviour and passenger responses, and

(9) Crew preventative measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aircraft.

Reporting Acts of unlawful Interference.

9.5.1.4.—(*a*) Following an act of unlawful interference on board an aircraft the PIC or, in his absence, the AOC holder shall submit, without delay, a report of such an act to the designated local authority and the Authority in the State of the operator.

Aircraft Search Procedure Checklist.

9.5.1.5.—(*a*) Each AOC holder shall ensure that all aircraft carry a checklist of the procedures to be followed for that type aircraft in searching for concealed weapons, explosives, or other dangerous devices.

(*b*) The checklist shall be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aeroplane.

Flight Crew Compartment Doors, If Installed-Security Procedures.

9.5.1.6.—(*a*) The flight crew compartment door on aircraft operated for the purpose of carrying passengers shall be capable of being locked from within the compartment in order to prevent unauthorised access.

(*b*) Each AOC holder shall have an approved means by which the cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.

(*c*) All passenger carrying aeroplanes shall be equipped with an approved flight crew compartment door, where practicable, that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons. This door shall be capable of being locked and unlocked from either pilot's station.

(1) The door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons ; and

(2) Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

Flight Crew Compartment Doors, Large Aeroplanes—Security Procedures.

9.5.1.7.—(*a*) All aeroplanes certificated with a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity greater than 60 shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons. This door shall be capable of being locked and unlocked from either pilot's station.

(1) The door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons ; and

(2) Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

Carriage of Weapons.

9.5.1.8.—(*a*) Where an operator accepts the carriage of weapons removed from passengers, the aeroplane shall have provision for stowing such weapons in a place so that they are not accessible to any person during flight time.

AOC Dangerous Goods Management.

9.6. AOC DANGEROUS GOODS MANAGEMENT

Applicability.

9.6.1.1.—(*a*) Subpart 9.6 provides those certification requirements that apply to management and transport of dangerous goods.

Approval to Transport Dangerous Goods.

9.6.1.2.—(*a)* No AOC holder may transport dangerous goods unless approved to do so by the Authority.

Scope.

9.6.1.3.—(*a*)Each AOC holder shall comply with the provisions contained in the ICAO Technical Instructions for the Safe Transport of Dangerous Goods By Air, ICAO Doc. 9284 (Technical Instructions) on all occasions when dangerous goods are carried, irrespective of whether the flight is wholly or partly within or wholly outside the territory of Nigeria. Where dangerous goods are to be transported outside the territory of Nigeria, the AOC holder shall review and comply with the appropriate variations noted by contracting states contained in Attachment 3 to the Technical Instructions.

(*b*) Articles and substances which would otherwise be classified as dangerous goods are excluded from the provisions of Subpart 9.6, to the extent specified in the Technical Instructions, provided they are—

(1) Required to be aboard the aircraft for operating reasons ;

(2) Carried as catering or cabin service supplies ;

(3) Carried for use in flight as veterinary aid or as a humane killer for an animal ; or

(4) Carried for use in flight for medical aid for a patient, provided that—

(*i*) Gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas ;

(*ii*) Drugs, medicines and other medical matter are under the control of trained personnel during the time when they are in use in the aircraft ;

(*iii*) Equipment containing wet cell batteries is kept and, when necessary secured, in an upright position to prevent spillage of the electrolyte ; and

(*iv*) Proper provision is made to stow and secure all the equipment during take-off and landing and at all other times when deemed necessary by the PIC in the interests of safety ; or

(*v*) They are carried by passengers or crewmembers.

(*c*) Articles and substances intended as replacements for those in paragraph

(*b*)(1) may be transported on an aircraft as specified in the Technical Instructions.

Limitations on the Transport of Dangerous Goods.

9.6.1.4—(*a*) Each AOC holder shall take all reasonable measures to ensure that articles and substances that are specifically identified by name or generic description in the Technical Instructions as being forbidden for transport under any circumstances are not carried on any aircraft.

(*b*) Each AOC holder shall take all reasonable measures to ensure that articles and substances or other goods that are identified in the Technical Instructions as being forbidden for transport in normal circumstances or infected live animals are transported only when—

(1) They are exempted by the States concerned under the provisions of the Technical Instructions ; or

(2) The Technical Instructions indicate they may be transported under an approval issued by the State of Origin.

Classification.

9.6.1.5—(*a*) Each AOC holder shall ensure that articles and substances are classified as dangerous goods as specified in the Technical Instructions.

Packing.

9.6.1.6—(*a*) Each AOC holder shall ensure that dangerous goods are packed as specified in the Technical Instructions.

(*b*) Packing used for the transport of dangerous goods shall :

(1) Be of good quality and shall be constructed and securely closed so as to prevent leakage which might be caused in normal conditions of transport, by changes in temperature, humidity or pressure, or by vibration.

(2) Be suitable for the contents. Packaging in direct contact with dangerous goods shall be resistant to any chemical or other action of such goods.

(3) Meet the material and construction specifications in the Technical Instructions.

(4) Be tested in accordance with the provisions of the Technical Instructions.

(5) For which retention of a liquid is a basic function, shall be capable of withstanding, without leaking, the pressure stated in the Technical Instructions.

(6) For inner packaging, shall be so packed, secured or cushioned as to prevent their breakage or leakage and to control their movement within the outer packaging(s) during normal conditions of air transport. Cushioning and absorbent materials shall not react dangerously with the contents of the packaging.

(7) Not be reused until it has been inspected and found free from corrosion or other damage. Where packaging is re-used, all necessary measures shall be taken to prevent contamination of subsequent contents.

(*c*) If because of the nature of their former contents, uncleaned empty packaging may present a hazard, they shall be tightly closed and treated according to the hazard they constitute.

(*d*) No harmful quantity of a dangerous substance shall adhere to the outside of packages.

Labeling and Marking.

9.6.1.7—(*a*) Each AOC holder shall ensure that packages, overpacks and freight containers are labeled as specified in the Technical Instructions.

(*b*) Each AOC holder shall ensure that packages, overpacks and freight containers are marked with :

(1) the proper shipping name of its contents ;

(2) the UN number, when assigned, and

(3) other such markings as may be specified in the Technical Instructions.

(*c*) Each AOC holder shall ensure that packaging manufactured to a specification contained in the Technical Instructions shall be so marked in accordance with the Technical Instructions.

(*d*) Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of Nigeria, the AOC holder shall ensure that labeling and marking are in the English language in addition to any other language requirements.

Dangerous Goods Transport Document.

9.6.1.8—(*a*) Each AOC holder shall ensure that, except when otherwise specified in the Technical Instructions, dangerous goods are accompanied by a dangerous goods transport document.

(*b*) Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of Nigeria, the AOC holder shall ensure that the English language is used for the dangerous goods transport document in addition to any other language requirements.

Acceptance of Dangerous Goods.

9.6.1.9—(*a*) No AOC holder may accept dangerous goods for transport until the package, overpack or freight container has been inspected in accordance with the acceptance procedures in the Technical Instructions.

(*b*) Each AOC holder, or its handling agent, shall use an acceptance check list which—

(1) Shall allow for all relevant details to be checked ; and

(2) Shall be in such form as will allow for the recording of the results of the acceptance check by manual, mechanical or computerised means.

Inspection for Damage, Leakage or Contamination.

9.6.1.10—(*a*) Each AOC holder shall ensure that :

(1) Packages, overpacks and freight containers are inspected for evidence of leakage or damage immediately prior to loading on an aircraft or into a unit load device, as specified in the Technical Instructions.

(2) A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein.

(3) Leaking or damaged packages, overpacks or freight containers are not loaded on an aircraft.

(4) Any package of dangerous goods found on an aircraft and which appears to be damaged or leaking is removed or arrangements made for its removal by an appropriate authority or organisation.

(5) After removal of any leaking or damaged goods, the remainder of the consignment is inspected to ensure it is in a proper condition for transport and that no damage or contamination has occurred to the aircraft or its load.

(6) Packages, overpacks and freight containers are inspected for signs of damage or leakage upon unloading from an aircraft or from a unit load

device and, if there is evidence of damage or leakage, the area where the dangerous goods were stowed is inspected for damage or contamination.

Removal of Contamination.

9.6.1.11—(*a*) Each AOC holder shall ensure that—

(1) Any contamination found as a result of the leakage or damage of dangerous goods is removed without delay ; and

(2) An aircraft which has been contaminated by radioactive materials is immediately taken out of service and not returned until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

Loading Restrictions and Stowage of Dangerous Goods.

9.6.1.12—(*a*) Each AOC holder shall ensure that packages and overpacks containing dangerous goods and freight containers containing radioactive materials are loaded and stowed in accordance with the Technical Instructions.

(1) Passenger Cabin and Flight Deck. Each AOC holder shall ensure that dangerous goods are not carried in an aircraft cabin occupied by passengers or on the flight deck, unless otherwise specified in the Technical Instructions.

(2) Cargo Compartments. Each AOC holder shall ensure that dangerous goods are loaded, segregated, stowed and secured on an aircraft as specified in the Technical Instructions.

(3) Dangerous Goods Designated for Carriage Only on Cargo Aircraft. Each AOC holder shall ensure that packages of dangerous goods bearing the "Cargo Aircraft Only" label are carried on a cargo aircraft and loaded as specified in the Technical Instructions, and in a manner that a crew member or other authorised person can see, handle and, where size and weight permit, separate such packages from other cargo in flight.

(*b*) Packages containing dangerous goods shall be separated when stowing as follows :

(1) Those packages that might react dangerously with other packages shall not be stowed next to each other or in a position that might allow interaction between them in the event of a leakage.

(2) Those packages containing toxic and infectious substances shall be stowed in accordance with the Technical Instructions.

(3) Those packages containing radioactive materials shall be stowed so that they are separated from persons, live animals and undeveloped film, and secured in flight in accordance with the Technical Instructions.

(*c*) The AOC holder shall protect and secure any dangerous goods in such a manner that will prevent any movement in flight that might change the orientation of the packages.

9.6.1.13—(*a*) Information to Ground Staff. Each AOC holder shall ensure that : Provision of Information.

(1) Information is provided to enable ground staff to carry out their duties with regard to the transport of dangerous goods, including the actions to be taken in the event of incidents and accidents involving dangerous goods ; and

(2) Where applicable, the information referred to in paragraph (*a*)(1) is also provided to the handling agent.

(b) Information to Passengers. Each AOC holder shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(c) Information to Shippers. Each AOC holder shall ensure that information is promulgated as required by the Technical Instructions so that shippers of dangerous goods are provided with the information as required by the Technical Instructions to enable them to carry out their responsibilities with regard to the transport of dangerous goods and the action to be taken in the event of emergencies arising involving dangerous goods.

(d) Information to Acceptance Points Personnel. Each AOC holder and, where applicable, the handling agent shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods, including the actions to be taken in the event of emergencies arising involving dangerous goods.

(e) Information to Crew Members. Each AOC holder shall ensure that information is provided in the Operations Manual to enable crew members to carry out their responsibilities in regard to the transport of dangerous goods, including the actions to be taken in the event of emergencies arising involving dangerous goods.

(f)Information to the PIC. Each AOC holder shall ensure that the PIC is provided, as early as practicable before the departure of the flight, with written information, as specified in the Technical Instructions.

(g) Information in the Event of an In-Flight Emergency. If an in-flight emergency occurs, the PIC shall, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of the aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.

(h) Information in the Event of an Aircraft Incident or Accident. Each AOC holder which is involved in an aircraft accident or incident shall—

(1) As soon as possible, inform the appropriate authority of the State in which the aircraft accident or incident occurred of any dangerous goods carried ; and

(2) On request, provide any information required to minimise the hazards created by any dangerous goods carried.

Dangerous Goods Training Programme and Manual.

9.6.1.14—(*a*) Crew members, passenger handling staff, and security staff employed by the AOC holder who deal with the screening of a passengers and their baggage and cargo shall have received training which covers as a minimum, the areas identified in Part 8: IS 8.10.1.10 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.

(*b*) An AOC holder shall provide dangerous goods training manuals which contain adequate procedures and information to assist personnel in identifying packages marked or labelled as containing hazardous materials including—

(1) Instructions on the acceptance, handling, and carriage of hazardous materials.

(2) Instructions governing the determination of proper shipping names and hazard classes.

(3) Packaging, labelling, and marking requirements.

(4) Requirements for shipping papers, compatibility requirements, loading, storage, and handling requirements.

(5) Restrictions.

Dangerous Goods Incident and Accident Reports.

9.6.1.15—(*a*) Each AOC holder shall report dangerous goods incidents and accidents to the Authority within 72 hours of the event, unless exceptional circumstances prevent this.

(*b*) Each AOC holder shall report undeclared or misdeclared dangerous goods discovered in cargo or passenger's baggage to the Authority within 72 hours of the discovery, unless exceptional circumstances prevent this.

Shipper's Responsibilities.

9.6.1.16—(*a*) No person shall offer a package, overpack or freight container containing dangerous goods for shipment by air unless that person has, in accordance with the Technical Instructions, ensured that the dangerous goods are properly—

(1) Classified ;

(2) Packed ;

(3) Labelled and

(4) Accompanied by a properly executed dangerous good transport document.

(*b*) In completing the dangerous goods transport document for the AOC holder, the shipper shall, in accordance with the Technical Instructions and any other regulations of Nigeria.

(1) Declare that the dangerous goods are fully and accurately described by their proper shipping names ;

(2) Declare that the dangerous goods are classified, packed, marked and labelled and in the proper condition for transport ;

(3) Complete the form in English when the dangerous goods are to be carried either wholly or partly outside Nigeria ; and

(4) Sign the form.

Dangerous Goods Security Provisions.

9.6.1.17—(*a*) Each shipper, operator and other individuals engaged in the transport of dangerous goods by air shall establish security measures, consistent with these regulations, to minimise theft or misuse of dangerous goods that may endanger persons, property or the environment.

Operators with no Operational Approval to Transport Dangerous Goods as Cargo.

9.6.1.17.—(*a*) An AOC holder that does not possess approval to transport dangerous goods shall have :

(1) Established a dangerous goods training programme that meets the requirements of Part 15, the applicable requirements of the Technical Instructions, Part 1, Chapter 4, and the requirements of the State's regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals ;

(2) Established dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Part 15, the Technical Instructions and the State's regulations to allow operator personnel to :

(*i*) Identify and reject undeclared dangerous goods, including COMAT classified as dangerous goods ; and

(*ii*) Report to the appropriate authorities of the State of the Operator and the State in which it occurred any :

(A) Occasions when undeclared dangerous goods are discovered in cargo or mail ; and

(B) Dangerous goods accidents and incidents.

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IS 9.1.1.7 (C)—(a)The AOC and its associated operations specifications shall contain the minimum information required in paragraphs (*c*) and (*d*) respectively, in a standardised format. Contents of Air Operators Certificate.

(*b*) The air operator certificate and its associated operations specifications shall define the operations for which an operator is authorised.

(*c*) The AOC shall be based on the following template :

AIR OPERATOR CERTIFICATE

[1]	**State of the Operator :** [2]	[1]
	Issuing Authority : [3]	
AOC# : [4]	**Operator Name :** [6]	**Operational Points of Contact :** [10] Contact details, at which operational management can be contacted without undue delay, are listed in_________.[11]
	DBA Trading Name : [7]	
Expiry Date : [5]	**Operator address :** [8]	
	Telephone : [9]	
	Fax :	
	E-mail :	

This certificate certifies that _________________________[12] is authorised to perform commercial air operations, as defined in the attached operations specifications, in accordance with the Operations Manual and the _________________________.[13]

Date of issue[14]**:** **Name and Signature**[15]**:**

Title:

Notes :

1. *For use of the State of the Operator.*
2. *Replace by the name of the State of the Operator.*
3. *Replace by the identification of the issuing authority of the State of the Operator.*
4. *Unique AOC number, as issued by the State of the Operator.*
5. *Date after which the AOC ceases to be valid (dd-mm-yyyy).*
6. *Replace by the operator's registered name.*
7. *Operator's trading name, if different. Insert "DBA" before the trading name (for "doing business as").*
8. *Operator's principal place of business address.*
9. *Operator's principal place of business telephone and fax details, including the country code. E-mail to be provided if available.*
10. *The contact details include the telephone and fax numbers, including the country code, and the e-mail address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters, as appropriate.*

11. *Insert the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference, e.g.: "Contact details are listed in the operations manual. Gen/Basic, Chapter 1, 1.1" or "…are listed in the operations specifications, page 1" or "…are listed in an attachment to this document."*

12. *Operator's registered name*

13. *Insertion of reference to the appropriate civil aviation regulations.*

14. *Issuance date of the AOC (dd-mm-yyyy).*

15. *Title, name and signature of the authority representative. In addition, an official stamp may be applied on the AOC (identification of the issuing Authority of the State of the Operator).*

(*d*) For each aircraft model in the operator's fleet, identified by aircraft make, model and series, the following list of authorisations, conditions and limitations shall be included: issuing authority contact details, operator name and AOC number, date of issue and signature of the Authority representative, aircraft model, types and area of operations, special limitations and authorisations.

Note: If authorisations and limitations are identical for two or more models, these models may be grouped in a single list.

Contents of Operations Specifications.

IS: 9.1.1.7(E)—(*a*)The operations specifications layout shall be as follows :

Note:- The Minimum Equipment List (MEL) constitutes an integral part of the Operations Manual

OPERATIONS SPECIFICATIONS (*subject to the approved conditions in the Operations Manual*) **Issuing Authority Contact Details**[1]			
Telephone :	Fax :	E-mail :	
AOC#[2] :	Operator Name[3] :	Date[4] :	Signature :
DBA Trading Name :			
Aircraft Model[5] :			

Types of Operation : ☐Passengers ☐Cargo ☐Other[6]:				
Area of operation[7] :				
Special Limitations[8]:				
Special Authorisations	*Yes*	*No*	*Specific Approvals*9	*Remarks*
Dangerous Goods Low Visibility Operations	☐	☐		
Approach and Landing	☐	☐	CAT[10] : ___ RVR : ___ m DH : ___ ft	
Take-off	☐	☐	RVR11: ____m	
RVSM[12] ☐N/A	☐	☐		
ETOPS[13] ☐N/A	☐	☐	Maximum Diversion Time[14]: ____ Minutes	
Navigation Specifications for PBN Operations[15]	☐	☐		
Continuing Airworthiness[16] Other[18]	x ☐	x ☐	[17]	[16]

NOTES :

1. Telephone and fax contact details of the Authority, including the country code. E-mail to be provided if available.
2. Insertion of associated AOC number.
3. Insertion of the operator registered name and the operator trading name, if different. Insert "*DBA*" before the trading name (for "Doing business as").
4. Issuance date of the operations specifications (dd-mm-yyyy) and signature of the Authority representative.
5. Insertion of the Commercial Aviation Safety Team (CAST) ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/
6. Other type of transportation to be specified (e.g. emergency medical service).
7. Listing of geographical area(s) of authorised operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).
8. Listing of applicable special limitations (e.g. VFR only, Day only, etc.).
9. List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).
10. Insertion of applicable precision approach category: CAT I, II, IIIA, IIIB, IIIC. Insertion of minimum RVR in meters and Decision Height in feet. One line is used per listed approach category.
11. Insertion of approved minimum take-off RVR in meters. One line per approval may be used if different approvals are granted.
12. Not Applicable (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.
13. Extended range operations (ETOPS) currently applies only to twin-engined aircraft. Therefore

the Not Applicable (N/A) box may be checked if the aircraft model has more than 2 engines. Should the concept be extended to 3 or 4-engine aircraft in the future, the Yes or No checkbox will be required to be checked.

14. The threshold distance may also be listed (in nm), as well as the engine type.

15. Performance-based Navigation (PBN): one line is used for each PBN specifications authorisation (e.g. RNAV 1, RNP 4), with appropriate limitations or conditions listed in the "Specific Approvals" and/or "Remarks" columns.

16. Limitations, conditions and regulatory basis for operational approval associated with the Performance-based Navigation specifications (e.g. GNSS, DME/DME/IRU). Information on performance-based navigation, and guidance concerning the implementation and operational approval process, are contained in the Performance-based Navigation Manual (Doc9613).

17. Insert the name of the person/organisation, responsible for ensuring that the continuing airworthiness of the aircraft is maintained and the regulations which require the work, i.e. within the AOC regulation or a specific approval (e.g. EC2042/2003, Part M, Subpart G).

18. Other authorisations or data can be entered here, using one line (or one multi-line block) per authorisation (e.g. special approach authorisations, NMPS, approved navigation performance, etc.).

(*b*) In addition to the items in (*d*) and (*e*) operations specifications may include other specific authorisation, such as:

(1) Special aerodrome operations (e.g. short take-off and landing operations or land and hold short operations) ;

(2) Special approach procedures (e.g. steep gradient approach, instrument landing system precision runway monitor approach, localizer-type directional aid precision runway monitor approach, RNP approach, etc.) ;

(3) Single-engine passenger transport at night or in instrument meteorological (IMC) conditions ;

(4) Operations in areas with special procedures (e.g. operations in areas using different altimetry units or altimeter setting procedures).

Management Personnel Required for Commercial Air Transport Operations.

IS : 9.2.2.2—(*a*) Each AOC holder shall make arrangements to ensure continuity of supervision if operations are conducted in the absence of any required management personnel.

(*b*) Required management personnel shall be contracted to work sufficient hours such that the management functions are fulfilled.

(*c*) A person serving in a required management position for an AOC holder may not serve in a similar position for any other AOC holder, unless an exemption is issued by the Authority.

(*d*) The minimum initial qualifications for a Director of Operations are—

(1) An ATP licence ; and

(2) 3 years experience as PIC in commercial air transport operations—

(*i*) Of large aircraft if the AOC holder operates large aircraft, or

(*ii*) Of either large or small aircraft if the AOC holder operates only small aircraft.

(*e*) The minimum qualifications for a Chief Pilot are—

(1) An ATP licence with the appropriate ratings for at least one of the aircraft used in the AOC holder's operations ; and

(2) 3 years experience as PIC in commercial air transport operations—

(*i*) In large aircraft if the AOC holder operates large aircraft, or

(*ii*) In either large or small aircraft if the AOC holder operates only small aircraft.

Note: The Authority may accept a commercial pilot licence with instrument rating in lieu of the ATP licence if the PIC requirements for the operations conducted require only a commercial certificate.

(*f*) The minimum entry qualifications for a Director of Maintenance are—

(1) An Aircraft Maintenance Engineer (AME) licence with airframe and powerplant ratings ;

(2) 3 years experience in maintaining the same category and class of aircraft used by the AOC holder including 1 year in the capacity of returning aircraft to service ; and

(3) 1 year supervisory experience maintaining the same category and class of aircraft used by the AOC holder.

(*g*) The minimum entry qualifications for a Quality Manager are—

(1) Be a holder of Aircraft Maintenance Engineers' Licence in the following ratings: Airframes and Powerplant or Avionics, (ratings on aircraft type not essential) with five (5) years working experience in line/base maintenance, maintenance planning or technical services ; or

(2) Be a person qualified by holding an academic degree in an aeronautical, mechanical or electrical electronic engineering discipline from a recognized university or other higher educational institution ; or

(3) Be a holder of Commercial Pilot Licence (CPL) (For AOC holders only).

(4) A minimum of five (5) years working experience in the quality system and /or continuing airworthiness in the aviation industry.

(5) A person with proven satisfactory audit experience, preferably in aviation, acceptable to the Authority.

(6) Must have in-depth knowledge of Nigeria Civil Aviation Regulations and Standard Maintenance Practices.

(7) Broad knowledge of the aviation and the organizations activities and procedures.

(8) Good understanding of quality management principles.

(9)Oral and'written communication skills

(*h*) AOC holder may employ a person who does not meet the appropriate airman qualification or experience if the Authority issues an exemption finding that that person has comparable experience and can effectively perform the required management functions.

Quality System.

IS: 9.2.2.3.—(*a*) in order to show compliance with 9.2.2.3, an AOC holder shall establish its quality system in accordance with the instruction and information contained in the following paragraphs.

1.0. GENERAL

Terminology.

1.1.—(*a*) The terms used in the context of the requirement for an AOC's quality system have the following meaning :

(1) Accountable Manager. The person acceptable to the Authority who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Authority, and any additional requirements defined by the operator.

(2) Quality assurance. Quality assurance, as distinguished from quality control, involves activities in the business, systems, and technical audit areas. A set of predetermined, systemic actions which are required to provide adequate confidence that a product or service satisfies quality requirements.

1.2. QUALITY POLICY.

1.2.1. An operator shall establish a formal, written quality policy statement that is a commitment by the accountable manager as to what the quality system is intended to achieve. The quality policy shall reflect the achievement and continued compliance with the [Model Regulations] together with any additional standards specified by the operator.

1.2.2. The accountable manager is an essential part of the operator's management organisation. With regard to the text in 9.2.2.2(a), the term "accountable manager" is intended to mean the Chief Executive/President/ Managing Director/ General Manager, etc. of the operator's organisation, who by virtue of his or her position has overall responsibility (including financial) for managing the organisation.

1.2.3. The accountable manager will have overall responsibility for the operator's quality system, including the frequency, format and structure of the internal management evaluation activities as prescribed in paragraph 3.9 below.

1.3. PURPOSE OF THE QUALITY SYSTEM

1.3.1. The quality system shall enable the operator to monitor compliance with these [*Model Regulations*], the operator's manual system, and any other standards specified by the operator, or the Authority, to ensure safe operations and airworthy aircraft.

1.4. QUALITY MANAGER

1.4.1. The function of the quality manager to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy aircraft as required by these [Model Regulations] may be carried out by more than one person by means of different, but complementary, quality assurance programmes.

1.4.2. The primary role of the quality manager is to verify, by monitoring activity in the fields of flight operations, maintenance, crew training and ground operations, that the standards required by the Authority, and any additional requirements defined by the operator, are being carried out under the supervision of the relevant required management personnel.

1.4.3. The quality manager shall be responsible for ensuring that the quality assurance programme is properly established, implemented and maintained.

1.4.4. The quality manager shall :

(*a*) report to the accountable manager ;

(*b*) not be one of the required management personnel ; and

(*c*) have access to all parts of the operator's, and as necessary, any sub-contractor's organisation.

1.4.5. In the case of small/very small operators, the posts of the Accountable Manager and quality manager may be combined.

2.0. QUALITY SYSTEM

2.1. INTRODUCTION

2.1.1. The operator's quality system shall ensure compliance with and adequacy of operational and maintenance activities requirements, standards, and operational procedures.

2.1.2. The operator shall specify the basic structure of the quality system applicable to the operation.

2.1.3. The quality system shall be structured according to the size and complexity of the operation to be monitored.

2.2. SCOPE.

2.1.4. As a minimum, the quality system shall address the following :

(*a*) The provisions of these Regulations ;

(*b*) The operator's additional standards and operating practices ;

(*c*) The operator's quality policy ;

(*d*) The operator's organisational structure ;

(*e*) Responsibility for the development, establishment and management of the quality system ;

(*f*) Documentation, including manuals, reports and records ;

(*g*) Quality procedures ;

(*h*) Quality assurance programme ;

(*i*) The required financial, material and human resources ;

(*j*) Training requirements.

2.2.2 The quality system shall include a feedback system to the accountable manager to ensure that corrective actions are both identified and promptly addressed. The feedback system shall also specify who is required to rectify discrepancies and non-compliance in each particular case, and the procedure to be followed if corrective action is not completed within an appropriate timescale.

2.3 Relevant Documentation.

2.3.1 Relevant documentation includes the relevant part of the operator's manual system.

2.3.2 In addition, relevant document shall include the following :

(*a*) Quality policy ;

(*b*) Terminology ;

(*c*) Specified operational standards ;

(*d*) A description of the organisation ;

(*e*) The allocation of duties and responsibilities ;

(*f*) Operational procedures to ensure regulatory compliance ;

(*g*) Accident prevention and flight safety programme ;

(*h*) The quality assurance programme, reflecting ;

(*i*) Schedule of the monitoring process ;

(*j*) Audit procedures ;

(*k*) Reporting procedures ;

(*l*) Follow-up and corrective action procedures ;

(*m*) Recording system ;

(*n*) The training syllabus ; and

(*o*) Document control.

3.0 Quality Assurance Programme.

3.1 Introduction.

3.1.1 The quality assurance programme shall include all planned and systematic actions necessary to provide confidence that all operations and maintenance are conducted in accordance with all applicable requirements, standards and operational procedures.

3.1.2 When establishing a quality assurance programme, consideration shall be given to at least the following :

(*a*) Quality inspection ;
(*b*) Audit ;
(*c*) Auditors ;
(*d*) Auditor's independence ;
(*e*) Audit scope ;
(*f*) Audit scheduling ;
(*g*) Monitoring and corrective action ;
(*h*) Management evaluation.

3.2 QUALITY INSPECTION

3.2.1 The primary purpose of a quality inspection is to observe a particular event/action/document, etc. in order to verify whether established operational procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.

3.2.2 Typical subject areas for quality inspections are :

(*a*) Actual flight operations ;
(*b*) Ground deicing/anti-icing ;
(*c*) Flight support services ;
(*d*) Load control ;
(*e*) Maintenance;
(*f*) Technical standards ; and
(*g*) Training standards.

3.2.3 Typical methods for quality inspections for maintenance include :

(*a*) Product sampling - the part inspection of a representative sample of the aircraft fleet ;
(*b*) Defect sampling - the monitoring of defect rectification performance;
(*c*) Concession sampling - the monitoring of any concession to not carry out maintenance on time ;
(*d*) On time maintenance sampling - the monitoring of when (flying hours/ calendar time/flight cycles, etc.) aircraft and their components are brought in for maintenance ;
(*e*) Sample reports of unairworthy conditions and maintenance errors on aircraft and components.

3.3 AUDIT.

3.3.1 An audit is a systematic, and independent comparison of the way in which an operation is being conducted against the way in which the published operational procedures say it shall be conducted.

3.3.2. Audits shall include at least the following quality procedures and processes :

(*a*) A statement explaining the scope of the audit ;
(*b*) Planning and preparation ;
(*c*) Gathering and recording evidence ; and
(*d*) Analysis of the evidence.

3.3.3. Techniques that contribute to an effective audit are :
(*a*) Interviews or discussions with personnel ;
(*b*) A review of published documents ;
(*c*) The examination of an adequate sample of records ;
(*d*) The witnessing of the activities that make up the operation ; and
(*e*) The preservation of documents and the recording of observations.

3.4. AUDITORS.

3.4.1. An operator shall decide, depending upon the complexity of the operations, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team shall have relevant operational and/or maintenance experience.

3.4.2. The responsibilities of the auditors shall be clearly defined in the relevant documentation.

3.5. AUDITOR'S INDEPENDENCE.

3.5.1. Auditors shall not have any day-to-day involvement in the area of the operation and/or maintenance activity that is to be audited. An operator may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities by the use of part-time auditors. An operator whose structure and size does not justify the establishment of full-time auditors, may undertake the audit function by the use of part-time personnel from within its own organisation or from an external source under the terms of an agreement acceptable to the Authority. In all cases the operator shall develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist is familiar with the type of operation and/or maintenance conducted by the operator.

3.5.2 The operator's quality assurance programme shall identify the persons within the company who have the experience, responsibility and authority to :

(*a*) Perform quality inspections and audits as part of ongoing quality assurance ;

(*b*) Identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings ;

(*c*) Initiate or recommend solutions to concerns or findings through designated reporting channels ;

(*d*) Verify the implementation of solutions within specific timescales ;

(*e*) Report directly to the quality manager.

3.6. Audit Scope

3.6.1. Operators are required to monitor compliance with the operational and maintenance procedures they have designed to ensure safe operations, airworthy aircraft and the serviceability of both operational and safety equipment. In doing so they shall as a minimum, and where appropriate, monitor :

(*a*) Organisation ;
(*b*) Plans and company objectives ;
(*c*) Operational procedures ;
(*d*) Flight safety ;
(*e*) Operator certification (AOC/Operations specifications)
(*f*) Supervision ;
(*g*) Aircraft performance ;
(*h*) All weather operations ;
(*i*) Communications and navigational equipment and practices ;
(*j*) Mass, balance and aircraft loading ;
(*k*) Instruments and safety equipment ;
(*l*) Manuals, logs, and records ;
(*m*) Flight and duty time limitations, rest requirements, and scheduling ;
(*n*) Aircraft maintenance/operations interface ;
(*o*) Use of the MEL ;
(*p*) Maintenance programmes and continued airworthiness ;
(*q*) Airworthiness directives management ;
(*r*) Maintenance accomplishment ;
(*s*) Defect deferral ;
(*t*) Flight crew ;
(*u*) Cabin crew ;
(*v*) Dangerous goods ;
(*w*) Security ;
(*x*) Training.

3.7. Audit Scheduling.

3.7.1 A quality assurance programme shall include a defined audit schedule and a periodic review cycle area by area. The schedule shall be flexible, and allow unscheduled audits when trends are identified. Follow-up audits shall be scheduled when necessary to verify that corrective action was carried out and that it was effective.

3.7.2 An operator shall establish a schedule of audits to be completed during a specified calendar period. All aspects of the operation shall be reviewed within every 12 month period in accordance with the programme unless an extension to the audit period is accepted as explained below. An operator may increase the frequency of audits at its discretion but shall not decrease the frequency without the agreement of the Authority. Audit frequency shall not be decreased beyond a 24 month period interval.

3.7.3 When an operator defines the audit schedule, significant changes to the management, organisation, operation, or technologies shall be considered as well as changes to the regulatory requirements.

3.8. MONITORING AND CORRECTIVE ACTION

3.8.1 The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby to ensure that defined policy, operational, and maintenance standards are continuously complied with. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up. The operator shall establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity shall be aimed at eliminating the causes of unsatisfactory performance.

3.8.2. Any non-compliance identified as a result of monitoring shall be communicated to the manager responsible for taking corrective action or, if appropriate, the accountable manager. Such non-compliance shall be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.

3.8.3 The quality assurance programme shall include procedures to ensure that corrective actions are taken in response to findings.These quality procedures shall monitor such actions to verify their effectiveness and that they have been completed. Organisational responsibility and accountability for the implementation of corrective action resides with the department cited in the report identifying the finding. The accountable manager will have the ultimate responsibility for resourcing the corrective active action and ensuring, through the quality manager, that the corrective action has re-established compliance with the standard required by the Authority, and any additional requirements defined by the operator.

3.8.4 Corrective action. Subsequent to the quality inspection/audit, the operator shall establish:

(*a*) The seriousness of any findings and any need for immediate corrective action ;

(*b*) The origin of the finding ;

(*c*) What corrective actions are required to ensure that the non-compliance does not recur ;

(*d*) A schedule for corrective action ;

(*e*) The identification of individuals or departments responsible for implementing corrective action ;

(*f*) Allocation of resources by the accountable manager, where appropriate.

3.8.5 The quality manager shall :

(*a*) Verify that corrective action is taken by the manager responsible in response to any finding of non-compliance ;

(*b*) Verify the corrective action includes the elements outlined in paragraph 3.8.4 above ;

(*c*) Monitor the implementation and completion of corrective action ;

(*d*) Provide management with an independent assessment of corrective action ; implementation and completion ;

(*e*) Evaluate the effectiveness of corrective action through follow-up process.

3.9. Management Evaluation

3.9.1 A management evaluation is a comprehensive, systematic, documented review by the management of the quality system, operational policies and procedures, and shall consider :

(*a*) The results of quality inspections, audits and any other indicators ;

(*b*) The overall effectiveness of the management organisation in achieving stated objectives.

3.9.2 A management shall identify and correct trends, and prevent, where possible, future non-conformities. Conclusions and recommendations made as a result of an evaluation shall be submitted in writing to the responsible manager for action. The responsible manager shall be an individual who has the authority to resolve issues and take action.

3.9.3 The accountable manager shall decide upon the frequency, format and structure of internal management evaluation activities.

3.10 Recording

3.10.1 Accurate, complete and readily accessible records documenting the results of the quality assurance programme shall be maintained by the operator. Records are essential data to enable an operator to analyse and determine the root causes of non-conformity, so that areas of non-compliance can be identified and addressed.

3.10.2. The following records shall be retained for a period of 5 years :

(*a*) Audit schedules ;
(*b*) Quality inspection and audit reports ;
(*c*) Responses to findings ;
(*d*) Corrective action reports ;
(*e*) Follow-up and closure reports ; and
(*f*) Management evaluation reports.

4.0. QUALITY ASSURANCE RESPONSIBILITY FOR SUB-CONTRACTORS

4.1. Sub-Contractors.

4.1.1. Operators may decide to sub-contract out certain activities to external agencies for the provision of services related to areas such as :

(*a*) Ground deicing/anti-icing ;
(*b*) Maintenance ;
(*c*) Ground handling ;
(*d*) Flight support (including performance calculations, flight planning, navigation database and dispatch) ;
(*e*) Training ;
(*f*) Manual preparation.

4.1.2. The ultimate responsibility for the product or service provided by the sub-contractor always remains with the operator. A written agreement shall exist between the operator and the sub-contractor clearly defining the safety related services and quality to be provided. The sub-contractor's safety related activities relevant to the agreement shall be included in the operator's quality assurance programme.

4.1.3. The operator shall ensure that the sub-contractor has the necessary authorisation/approval when required and commands the resources and competence to undertake the task.

5.0. QUALITY SYSTEM TRAINING

5.1. GENERAL

5.1.1. An operator shall establish effective, well planned and resourced quality related briefing for all personnel.

5.1.2. Those responsible for managing the quality system shall receive training covering :

(*a*) An introduction to the concept of the quality system ;
(*b*) Quality management ;
(*c*) The concept of quality assurance ;
(*d*) Quality manuals ;

(*e*) Audit techniques ;
(*f*) Reporting and recording ; and
(*g*) The way in which the quality system will function in the company.

5.1.3. Time shall be provided to train every individual involved in quality management and for briefing the remainder of the employees. The allocation of time and resources shall be governed by the size and complexity of the operation concerned.

5.2. SOURCES OF TRAINING

5.2.1. Quality management courses are available from the various [National] or International Standards Institutions, and an operator shall consider whether to offer such courses to those likely to be involved in the management of quality systems. Operators with sufficient appropriately qualified staff shall consider whether to carry out in-house training.

6.0. ORGANISATIONS WITH 20 OR LESS FULL-TIME EMPLOYEES

6.1. INTRODUCTION

6.1.1. The requiremet to establish and document a quality system, and to employ a quality manager applies to all operators. References to large and small operators elsewhere in these [Model Regulations] are governed by aircraft capacity (*i.e. more or less than 20 seats*) and by mass (i.e. greater or less than 10 tonnes maximum take-off mass). Such terminology is not relevant when considering the scale of an operation and the quality system required. In the context of quality systems therefore, operators shall be categorised according to the number of full time staff employees.

6.2. SCALE OF OPERATION

6.2.1. Operators who employ 5 or less full time staff are considered to be "*very small*" while those employing between 6 and 20 full time employees are regarded as "small" operators as far as quality systems are concerned. Full-time in this context means employed for not less than 35 hours per week excluding vacation periods.

6.2.2. Complex quality systems could be inappropriate for small or very small operators and the clerical effort required to draw up manuals and quality procedures for a complex system may stretch their resources. It is therefore accepted that such operators shall tailor their quality systems to suit the size and complexity of their operation and allocate resources accordingly.

6.3. QUALITY SYSTEM FOR SMALL/VERY SMALL OPERATORS

6.3.1. For small and very small operators it may be appropriate to develop a quality assurance programme that employs a checklist. The checklist shall have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the quality assurance shall be undertaken.

6.3.2 The "*small*" operator may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and or qualified organisations to perform the quality audits on behalf of the quality manager.

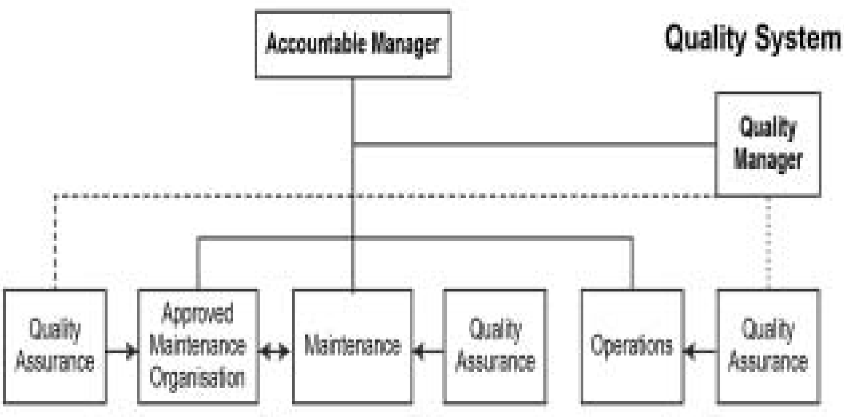
6.3.3 If the independent quality audit function is being conducted by external auditors, the audit schedule shall be shown in the relevant documentation.

6.3.4 Whatever arrangements are made, the operator retains the ultimate responsibility for the quality system and especially the completion and follow-up of corrective actions.

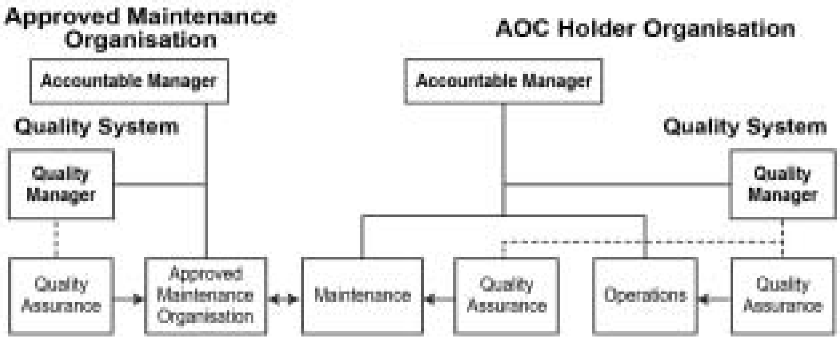
QUALITY SYSTEM —ORGANISATION EXAMPLES

(*a*) The following diagrams illustrate two typical examples of Quality organisations.

(1) Quality System within the AOC holder's organisation when the AOC holder also holds an approval for maintenance.



e
s
not integrated with the AOC holder.



Note: The Quality System and Quality Audit Programme of the AOC holder shall assure that the maintenance carried out by the approved organisation is in accordance with requirements specified by the AOC holder.

IS: 9.2.2.5—(*a*)An operator shall ensure that the following information or documentation is retained for the periods shown in the table below. Retention Records.

TABLE OF RECORD RETENTION

Flight Crew Records	
Flight, duty and rest time	2 years
Licence and medical certificate	Until 12 months after the flight crew member has left the employ of the operator.
Ground and flight training (all types)	Until 12 months after the flight crew member has left the employ of the operator
Route and aerodrome/heliport qualification training.	Until 12 months after the flight crew member has left the employ of the operator.
Dangerous good training	Until 12 months after the flight crew member has left the employ of the operator.

Security training	Until 12 months after the flight crew member has left the employ of the operator.
Proficiency and qualification checks (all types)	Until 12 months after the flight crew member has left the employ of the operator.
Cabin Crew Records Flight, duty and rest time	 2 years .
Licence, if applicable	Until 12 months after the cabin crew member has left the employ of the operator.
Ground and flight training (all types) and qualification checks	Until 12 months after the cabin crew member has left the employ of the operator.
Dangerous good training	Until 12 months after the cabin crew member has left the employ of the operator.
Security training	Until 12 months after the cabin crew member has left the employ of the operator.
Competency checks	Until 12 months after the cabin crew member has left the employ of the operator.
Records for other AOC Personnel	
Training/qualification of other personnel for whom an approved training programme is required in these regulations	Until 12 months after the employee has left the employ of the operator.

Licence, if required, and medical certificate if required	Until 12 months after the employee has left the employ of the operator
Proficiency or competency checks, if required	Until 12 months after the employee has left the employ of the operator.
Flight Preparation Forms Completed load manifest	3 months after the completion of the flight.
Mass and balance reports	3 months after the completion of the flight.
Dispatch releases	3 months after the completion of the flight.
Flight plans	3 months after the completion of the flight.
Passenger manifests	3 months after the completion of the flight.
Weather reports	3 months after the completion of the flight.
Flight Recorder Records	
Cockpit voice recordings	Preserved after an accident or incident for 60 days or longer if requested by the Authority
Flight data recordings	Preserved after an accident or incident for 60 days or longer if requested by the Authority
Aircraft Technical Logbook	
Journey records section	2 years
Maintenance records section	2 years
Maintenance Records of the Aircraft	
Total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life-limited components	3 months after the unit to which they refer has been permanently withdrawn from service.
Current status of compliance with all mandatory continuing airworthiness information.	3 months after the unit to which they refer has been permanently withdrawn from service

Appropriate details of modifications and repairs to the aircraft and its components	3 months after the unit to which they refer has been permanently withdrawn from service
Total time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the aircraft or its components subject to a mandatory overhaul life	3 months after the unit to which they refer has been permanently withdrawn from service
The detailed maintenance records to show all requirements for a maintenance release have been met	1 year after signing of the maintenance release
Other Records	
Operational flight plan	3 months after the completion of the flight
Quality system records	5 years
Fuel and Oil records	3 months
Dangerous goods transport document	6 months after the completion of the flight
Dangerous goods acceptance checklist	6 months after the completion of the flight
Records on cosmic and solar radiation dosage, if AOC holder operates aircraft that fly above 15 000 m (49 000 ft)	Until 12 months after the crew member has left the employ of the AOC holder

Note: See 9.3.1.5 s for details of the journey records section and 9.4.1.9 for details of the maintenance records section of the aircraft technical log.

Aircraft Technical Log.

IS: 9.2.2.8—(*a*)The following are two examples of an aircraft technical log :

Name of the Operator[1]	Flight Log[2]	Name of Commander :	Registration :	Sheet No[3]:
Address of the operator	Commander's Signature[4]:	Name and duty of other Crew Member(s) :	Aeroplane Type:	Date:

FLIGHT[5]				CHECK	BLOCK TIME			AIRBORNE TIME		LOAD		FUEL ON BOARD	
Nature of Flight:[6]	From:	To	No. of Ldg.:[7]	Flight Preparation:[8]	Off:	On:	Time:	Take-off:	Ldg:	Time: No. of Pax/Cargo (kg/lbs):	Take-off mass (kg/lbs):	Uplift:	Take-off[9] (ltrs/kg/lbs): Ldg:

FLIGHT DATA BLOCK TIME REPORT		
	Block Time:	Landings:
Total per Day:		
Total Previous Report:		
Total to Report:		

INCIDENTS/OCCURRENCES/OBSERVATIONS REPORT/DEFECTS NOTED[10]
Mark type of report: Operation/Technical/Other[11]. Also note any de-/anti-icing as instructed[12]

FLIGHT DATA FLIGHT TIME REPORT		
	Flight Time:	Next Maintenance Due:
Total this sheet:		Hours
Total from previous sheet:		Landings
Total to Report:		Date

CERTIFICATE OF RELEASE TO SERVICE	ACTIONS TAKEN[13]
Name of certifying staff & JAR 145 approval reference (if applicable)	
Certifies that the work specified except as otherwise specified was carried out in accordance with JAR-145 and in respect to that work the aeroplane/aeroplane component is considered ready for release to service.	
Signature	

---

1. Operator's name and address pre-printed or filled in by hand
2. Must be filled for

   Each day ; and

   Each flight crew
3. Sheet number (e.g. yy-nn) must be pre-printed or printed by hand. All sheets must be identifiable and numbered according to a continuous system that offers the same security when hand printed as when pre-printed.
4. The commander's signature states that everything on this sheet is correct.
5. For flights from A to A, a summary entry may be made. All other flights such as A to B etc., for each flight an entry must be made.
6. Such as Private, Commercial, Technical, Training, Sailplane towing, etc.
7. Number of landings if summary entry.
8. Flight Preparation according to the Operations Manual (commander's initials) state that :
   1. Weight and Balance is within Limit.
   2. Pre-flight check is done.
   3. Technical status is checked and aeroplane accepted by the commander.
   4. Passengers manifest/documentation performed.
9. Total Fuel on board (state the units unless pre-printed).
10. Incidents/Occurrences/Observations Report (Operation, Technical, Others) :

    If no report needs to be made state "-NIL-"

    If a report must be made state (mark) the type of report.
11. Number each observation sequentially for each log sheet.
12. If de- or anti-icing has been applied, state time and amount and kind of fluid applied or other action take, e.g. mechanical removal of snow or ice, if oil has been filled, state the time and amount.
13. Use the same number as the corresponding observation to link report and response.

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Address of Operator	Date:	CREW	LOAD	OIL	GROUND DEICING	Sheet Number 00000001
	Aeroplane Type: Registration:	Name of Commander: Name and duty of crew member:	No. of Pax: Mass (kg/lbs): Cargo: Take-off:	Engine 1 / Engine 2 Refilled: / Total: /	Type of fluid: Mixture: **Time of Deicing** Commenced: Finished:	Last mission: Total aeroplane hours: Total aeroplane landing: **Next Maintenance Due:** In hours: In landing:

FLIGHT				PRE-FLIGHT	BLOCK TIME		AIRBORNE TIME			FUEL ON BOARD (LTRS/KG/LBS)				
Flight No.	From	To	No. of Ldg.	Name/Signature	Off	On	Time	Take-off	Ldg.	Time	Uplift	Take-off	Ldg.	

Defects	Signature	Actions Taken	AMO Releases to Service
00000001-1		P/N: sn off: sn on:	Agreement number: Date: Place: Time: Name: Signature:
00000001-2		P/N: sn off: sn on:	Agreement number: Date: Place: Time: Name: Signature:
00000001-3		P/N: sn off: sn on:	Agreement number: Date: Place: Time: Name: Signature:
MEL DEFERRED DEFECT Item MEL Open Date Category Limit Date	Captain's Acceptance	Daily Check/Maintenance done:	Agreement number: Date: Place: Time: Name: Signature:

Flight Safety Documents System.

IS: 9.2.2.11—(*a*) The following outline addresses the major elements of an operator's flight safety documents system development process, with the aim of ensuring compliance with these Regulations.

1. 0 ORGANISATION

1.1 A flight safety documents system shall be organised according to criteria, which ensure easy access to information, required for flight and ground operations contained in the various operational documents comprising the system and which facilitate management of the distribution and revision of operational documents.

1.2 Information contained in a flight safety documents system shall be grouped according to the importance and use of the information, as follows :

(*a*) Time critical information, e.g., information that can jeopardise the safety of the operation if not immediately available ;

(*b*) Time sensitive information, e.g., information that can affect the level of safety or delay the operation if not available in a short time period ;

(*c*) Frequently used information ;

(*d*) Reference information, e.g., information that is required for the operation but does not fall under *b*) or *c*) above ; and

(*e*) Information that can be grouped based on the phase of operation in which it is used.

1.3 Time critical information shall be placed early and prominently in the flight safety documents system.

1.4 Time critical information, time sensitive information, and frequently used information shall be placed in cards and quick-reference guides.

2.0 *Validation*

A flight safety documents system shall be validated before deployment, under realistic conditions. Validation shall involve the critical aspects of the information use, in order to verify its effectiveness. Interactions among all groups that can occur during operations shall also be included in the validation process.

3.0 *Design*

3.1 A flight safety documents system shall maintain consistency in terminology and in the use of standard terms for common items and actions.

3.2 Operational documents shall include a glossary of terms, acronyms and their standard definition, updated on a regular basis to ensure access to the most recent terminology. All significant terms, acronyms and abbreviations included in the flight documents system shall be defined.

3.3 A flight safety documents system shall ensure standardisation across document types, including writing style, terminology, use of graphics and symbols, and formatting across documents. This includes a consistent location of specific types of information, consistent use of units of measurement and consistent use of codes.

3.4 A flight safety documents system shall include a master index to locate, in a timely manner, information included in more than one operational document.

Note : The master index must be placed in the front of each document and consist of no more than three levels of indexing. Pages containing abnormal and emergency information must be tabbed for direct access.

3.5 A flight safety documents system shall comply with the requirements of the operator's quality system, if applicable.

4.0 *Deployment*

Operators shall monitor deployment of the flight safety documents system, to ensure appropriate and realistic use of the documents, based on the characteristics of the operational environment and in a way which is both operationally relevant and beneficial to operational personnel. This monitoring shall include a formal feedback system for obtaining input from operational personnel.

5.0 AMENDMENT

5.1 Operators shall develop an information gathering, review, distribution and revision control system to process information and data obtained from all sources relevant to the type of operation conducted, including, but not limited to, the State of the Operator, State of design, State of Registry, manufacturers and equipment vendors.

Note : Manufacturers provide information for the operation of specific aircraft that emphasises the aircraft systems and procedures under conditions that may not fully match the requirements of operators. Operators shall ensure that such information meets their specific needs and those of the local authority.

5.2 Operators shall develop an information gathering, review and distribution system to process information resulting from changes that originate within the operator, including :

(*a*) Changes resulting from the installation of new equipment ;
(*b*) Changes in response to operating experience ;
(*c*) Changes in an operator's policies and procedures ;

(*d*) Changes in an operator certificate ; and

(*e*) Changes for purposes of maintaining cross fleet standardisation.

Note : Operators shall ensure that crew co-ordination philosophy, policies and procedures are specific to their operation.

5.3 A flight safety documents system shall be reviewed :

(*a*) on a regular basis (at least once a year) ;

(*b*) after major events (mergers, acquisitions, rapid growth, downsizing, etc.) ;

(*c*) after technology changes (introduction of new equipment) ; and

(*d*) after changes in safety regulations.

5.4 Operators shall develop methods of communicating new information. The specific methods shall be responsive to the degree of communication urgency.

Note : As frequent changes diminish the importance of new or modified procedures, it is desirable to minimise changes to the flight safety documents system.

5.5 New information shall be reviewed and validated considering its effects on the entire flight safety documents system.

5.6 The method of communicating new information shall be complemented by a tracking system to ensure currency by operational personnel. The tracking system shall include a procedure to verify that operational personnel have the most recent updates.

Dry Leasing of Foreign Registered Aircraft.

IS: 9.2.3.2—(*a*) An AOC holder may dry lease an aircraft for the purpose of commercial air transportation from any AOC holder of a State which is signatory to the Chicago Convention provided that the following conditions are met :

(1) The aircraft carries an appropriate airworthiness certificate issued, in accordance with ICAO Annex 8, by the State of Registry and meets the registration and identification requirements of that country.

(2) The aircraft is of a type design which complies with all of the requirements that would be applicable to that aircraft were it registered in Nigeria, including the requirements which shall be met for issuance of a Nigeria standard airworthiness certificate (including type design conformity, condition for safe operation, and the noise, fuel venting, and engine emission requirements).

(3) The aircraft is maintained according to an approved maintenance programme.

(4) The aircraft is operated by Nigeria-licensed airmen with additional licence authorisation by the State of Registry, employed by the AOC holder.

(*b*) Each AOC holder shall provide the Authority with a copy of the dry lease to be executed.

(*c*) Operational control of any dry leased aircraft rests with the AOC holder operating that aircraft.

(*d*) The Authority will list the dry leased aircraft on the lessor AOC holder's operations specifications.

(*e*) AOC holder engaged in dry leasing aircraft shall make the dry lease agreement explicit concerning the maintenance programme and MEL to be followed during the term of the dry lease.

Aircraft Interchange.

IS: 9.2.3.3.—(*a*) Before operating under an interchange agreement, each AOC holder shall show that—

(1) The procedures for the interchange operation conform with safe operating practices ;

(2) Required crew members and flight operations officers meet approved training requirements for the aircraft and equipment to be used and are familiar with the communications and dispatch procedures to be used ;

(3) Maintenance personnel meet training requirements for the aircraft and equipment, and are familiar with the maintenance procedures to be used ;

(4) Flight crew members and flight operations officers meet appropriate route and airport qualifications ;

(5) The aircraft to be operated are essentially similar to the aircraft of the AOC holder with whom the interchange is effected ; and

(6) The arrangement of flight instruments and controls that are critical to safety are essentially similar, unless the Authority determines that the AOC holder has adequate training programmes to ensure that any potentially hazardous dissimilarities are safely overcome by flight crew familiarisation.

(*b*) Each AOC holder conducting an interchange agreement shall include the pertinent provisions and procedures of the agreement in its manuals.

(*c*) The AOC holder shall amend their operations specifications to reflect an interchange agreement.

(*d*) The AOC holder shall comply with the applicable regulations of the State of Registry of an aircraft involved in an interchange agreement while it has operational control of that aircraft.

Wet Leasing.

IS: 9.2.3.4.—(*a*) Each AOC holder shall provide the Authority with a copy of the wet lease to be executed.

(*b*) The Authority will determine which party to a wet lease agreement has operational control considering the extent and control of certain operational functions such as :

(1) Initiating and terminating flights.

(2) Maintenance and servicing of aircraft.

(3) Scheduling crewmembers.

(4) Paying crewmembers.

(5) Training crewmembers.

(*c*) Each AOC holder engaged in a wet leasing arrangement shall amend its operations specifications to contain the following information :

(1) The names of the parties to the agreement and the duration of the agreement.

(2) The make, model, and series of each aircraft involved in the agreement.

(3) The kind of operation.

(4) The expiration date of the lease agreement.

(5) A statement specifying the party deemed to have operational control.

(6) Any other item, condition, or limitation the Authority determines necessary.

Emergency Evacuation Demonstration.

IS: 9.2.3.5.—(*a*) Each AOC holder shall conduct a partial emergency evacuation and ditching evacuation, observed by the Authority, that demonstrates the effectiveness of its crew member emergency training and evacuation procedures.

(*b*) Prior to conducting an emergency evacuation demonstration, the AOC holder shall apply for and obtain approval from the Authority.

(*c*) Cabin crew members used in the emergency evacuation demonstrations shall—

(1) Be selected at random by the Authority ;

(2) Have completed the AOC holder's Authority-approved training programme for the type and model of aircraft ; and

(3) Have passed the drills and competence check on the emergency equipment and procedures.

(*d*) To conduct the partial emergency evacuation demonstration, the AOC holder's assigned cabin crew members shall, using the AOC holder's line operating procedures—

(1) Demonstrate the opening of 50 percent of the required floor-level emergency exits and 50 percent of the required non-floor-level emergency exits (whose opening by a cabin crew member is defined as an emergency evacuation duty) and deployment of 50 percent of the exit slides, selected by the Authority ; and

(2) Prepare for use those exits and slides within 15 seconds.

(*e*) To conduct the ditching evacuation demonstration, the AOC holder's assigned cabin crew members shall—

(1) Demonstrate their knowledge and use of each item of required emergency equipment ;

(2) Prepare the cabin for ditching within 6 minutes after the intention to ditch is announced ;

(3) Remove each life raft from storage (one life raft, selected by the Authority, shall be launched and properly inflated or one slide life raft properly inflated) ; and

(4) Enter the raft (the raft shall include all required emergency equipment) and completely set it up for extended occupancy.

Demonstration Flights.

IS: 9.2.3.6.—(*a*) Each applicant for AOC shall conduct demonstration flights for each type of aircraft, including those aircraft materially altered in design, and for each kind of operation the AOC holder intends to conduct.

(1) *Definition* : "*Materially altered aircraft*" refers to aircraft having powerplants installed other than those for which it is certified ; or alterations to the aircraft or its components that materially affect flight characteristics.

(*b*) Each applicant for AOC shall conduct demonstration flights which contain at least :

(1) Fifty total hours of flight time for scheduled operation, unless the Authority determines that a satisfactory level of proficiency has been demonstrated in fewer hours ;

(2) Ten hours of night time and may not be reduced, if night flights are to be authorised ;

(3) Five instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorised ; and

(4) Entry into a representative number of en route airports, as determined by the Authority.

(*c*) Each applicant for AOC shall conduct demonstration flights which contain at least :

(1) 15 total hours of flight time for non-scheduled operation, unless the Authority determines that a satisfactory level of proficiency has been demonstrated in fewer hours ;

(2) Five hours of night time and may not reduced, if night flights are to be authorised ;

(3) Five instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorised ;

(*d*) Each applicant for AOC shall conduct demonstration flights which contain at least :

(1) 10 total hours of flight time for helicopter operation, unless the Authority determines that a satisfactory level of proficiency has been demonstrated in fewer hours ;

(2) Three instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorised ;

(*e*) No person may carry passengers in an aircraft during demonstration flights, except for those needed to make the demonstration flight and those designated by the Authority.

(*f*) For those AOC holders of aircraft of less than 5700 kg, the necessity and extent of demonstration shall be at the option of the Authority.

Operations Manual.

IS: 9.3.1.2—(*a*) Each AOC holder shall ensure that the contents and structure of the operations manual are in accordance with rules and regulations of the Authority, and are relevant to the area(s) and type(s) of operation.

(*b*) An operations manual, which may be issued in separate parts corresponding to specific aspects of operations shall be organised in accordance with the following structure :

(1) General (IS: 9.3.1.2(*e*)).

(2) Aircraft operating information (IS: 9.3.1.4).

(3) Areas, routes and aerodromes (IS: 9.3.1.20), and

(4) Training (IS: 9.3.1.3).

(*c*) An AOC holder may design a manual to be more restrictive than the Authority's requirements.

(*d*) Each AOC holder shall ensure that the operations manual presents the items of information listed below, to meet the requirements of 9.3.1.2(*g*). The manual may consist of two or more parts containing together all such information in a format and manner based upon the outline presented in paragraph (*d*) below. Each part of the operations manual must contain all information required by each group of personnel addressed in that part.

(1) General Policies.

(2) Duties and responsibilities of each crewmember, appropriate members of the ground organisation, and management personnel.

(3) Reference to appropriate Civil Aviation Regulations.

(4) Flight dispatching and operational control, including procedures for co-ordinated dispatch or flight control or flight following procedures and maintenance control procedures, as applicable.

(5) En route flight, navigation, and communication procedures, including procedures for the dispatch or release or continuance of flight if any item of equipment required for the particular type of operation becomes inoperative or unserviceable en route.

(6) Appropriate information from the en route operations specifications, including for each approved route the types of aircraft authorised, the type of operation such as VFR, IFR, day, night, etc., and any other pertinent information.

(7) Appropriate information from the airplane terminal instrument procedures and airport authorisations and limitations operations specifications, including for each airport—

(*i*) Its location ;

(*ii*) Its designation ;

(*iii*) The types of aircraft authorised ;

(*iv*) Instrument approach procedures ;

(*v*) Landing and take-off minimums ; and

(*vi*) Any other pertinent information.

(8) Procedures for familiarising passengers with the use of emergency equipment, during flight.

(9) Emergency equipment and procedures.

(10) The method of designating succession of command of flight crew members.

(11) Procedures for determining the usability of landing and take-off areas, and for disseminating pertinent information thereon to operations personnel.

(12) Procedures for operating in periods of ice, hail, thunderstorms, turbulence, or any potentially hazardous meteorological condition.

(13) Airman training programmes, including appropriate ground, flight, and emergency phases.

(14) Procedures for refueling aircraft, eliminating fuel contamination, protection from fire (including electrostatic protection), and supervising and protecting passengers during refueling.

(15) Methods and procedures for maintaining the aircraft weight and centre of gravity within approved limits.

(16) Where applicable, pilot and dispatcher route and airport qualification procedures.

(17) Accident notification procedures.

(18) Procedures and information to assist personnel to identify packages marked or labeled as containing hazardous materials and, if these materials are to be carried, stored, or handled, procedures and instructions relating to the carriage, storage, or handling of hazardous materials, including the following :

(*i*) Procedures for determining the proper shipper certification and proper packaging, marking, labeling, shipping documents, compatibility of materials, and instructions on the loading, storage, and handling.

(*ii*) Notification procedures for reporting hazardous material incidents.

(*iii*) Instructions and procedures for the notification of the pilot in command when there are hazardous materials aboard.

(19) Other information or instructions relating to safety.

(*e*) The general part or section of the operations manual shall contain at least the following :

1.0. ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL

Introduction.

1.1.—(*a*) A statement that the manual complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable Air Operator Certificate.

(*b*) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel in the performance of their duties.

(*c*) A list and brief description of the various operations manual parts, their contents, applicability and use.

(*d*) Explanations and definitions of terms and words used in the manual.

System of Amendment and Revision.

1.2.—(*a*) An operations manual shall describe who is responsible for the issuance and insertion of amendments and revisions.

(*b*) A record of amendments and revisions with insertion dates and effective dates is required.

(*c*) A statement that hand-written amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.

(*d*) A description of the system for the annotation of pages and their effective dates.

(*e*) A list of effective pages and their effective dates.

(*f*) Annotation of changes (on text pages and as practicable, on charts and diagrams).

(*g*) A system for recording temporary revisions.

(*h*) A description of the distribution system for the manuals, amendments and revisions.

(*i*) A statement of who is responsible for notifying the Authority of proposed changes and working with the Authority on changes requiring Authority approval.

2.0. Organisation and Responsibilities

Organisational Structure.

2.1. A description of the organisational structure including the general company organisation and operations department organisation. The relationship between the operations department and the other departments of the company. In particular, the subordination and reporting lines of all divisions, departments etc., which pertain to the safety of flight operations shall be shown. Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations.

Responsible Manager.

2.2. The name of each manager responsible for flight operations, the maintenance system, crew training and ground operations shall be listed. A description of their function and responsibilities shall be included.

Responsibilities and Duties of Operations Management Personnel.

2.3. A description of the duties, responsibilities, and authority of operations management personnel pertaining to the safety of flight operations and with compliance with applicable regulations shall be listed.

Authority, Duties and Responsibilities of a PIC.

2.4. A statement defining the authority, duties and responsibilities of the PIC shall be listed.

Duties and Responsibilities of Crew Members Other Than the PIC.

2.5. A statement defining the authority, duties, and responsibilities of all required aircraft crew members shall be listed.

3.0. Operational Control And Supervision

Supervision of the Operation by the AOC Holder.

3.1. A description of the system for supervision of the operation by the AOC holder shall be listed. This description shall show how the safety of flight operations and the qualifications of personnel involved in all such operations are supervised and monitored. In particular, the procedures related to the following items shall be described :

(*a*) Specifications for the operational flight plan ;

(*b*) Competence of operations personnel ; and

(*c*) Control, analysis and storage of records, flight documents, additional information, and safety related data.

System of Promulgation of Additional Operational Instructions and Information.

3.2 A description of any system for promulgating information which may be of an operational nature but is supplementary to that in the operations manual. The applicability of this information and the responsibilities for its promulgation shall be included.

3.3. A description of the main aspects of the flight safety programme including : Accident Prevention and Flight Safety Programme.

(*a*) Programmes to achieve and maintain risk awareness by all persons involved in flight operations ; and

(*b*) Evaluation of accidents and incidents and the promulgation of related information.

3.4. A description of the objectives, procedures, and responsibilities necessary to exercise operational control with respect to flight safety. Operational Control.

4.0. A description of the quality system adopted. Quality System.

5.0. CREW

5.1. An explanation of the method for determining crew compositions taking into account of the following : Crew Composition.

(*a*) Experience (total and on type), recency and qualification of the crew members ; and

(*b*) The designation of the PIC and, if required by the duration of the flight, the procedures for the relief of the PIC or other members of the flight crew.

(*c*) The flight crew for each type of operation including the designation of the succession of command.

5.2. The rules applicable to the designation of a PIC. Designation of the PIC.

5.3. Instructions on the succession of command in the event of flight crew incapacitation. Flight Crew Incapacitation.

6.0. FLIGHT CREW, CABIN CREW, FLIGHT OPERATIONS OFFICER, AND OTHER OPERATIONS PERSONNEL QUALIFICATIONS.

6.1. A description of the required licence rating(s), qualification/ competency (e.g., for routes and airports) experience, training, checking and recency of experience for operations personnel to conduct their duties. Consideration shall be given to the aircraft type, kind of operation, and composition of the crew. Qualifications.

6.2.—(*a*) Operation on more than one type or variant. Flight Crew.

6.3.—(*a*) Senior cabin crew member. Cabin Crew.

(*b*) Cabin crewmember.

(1) Required cabin crewmember.
(2) Additional cabin crewmember, and
(3) Cabin crewmember during familiarisation flights.

(*c*) Operation on more than one type or variant.

6.4. OTHER OPERATIONS PERSONNEL

7.0. FLIGHT AND DUTY TIME

Flight and Duty Time Limitations and Rest Schemes.

7.1.—(*a*) Flight Crew
(*b*) Cabin Crew
(*c*) Flight Operations Officer/ Flight Dispatcher

8.0. CREW HEALTH

Crew Health Precautions.

8.1. The relevant regulations and guidance for crew members concerning health including :

(*a*) Alcohol and other intoxicating liquor ;
(*b*) Narcotics ;
(*c*) Drugs ;
(*d*) Sleeping tablets ;
(*e*) Pharmaceutical preparations ;
(*f*) Immunisation ;
(*g*) SCUBA diving ;
(*h*) Blood donation ;
(*i*) Meal precautions prior to and during flight ;
(*j*) Sleep and rest ; and
(*k*) Surgical operations.

9.0. OPERATING PROCEDURES

Flight Preparation Instructions.

9.1. As applicable to the operation :

9.1.1. Criteria for Determining the Usability of Airports.
9.1.2. The method for determining minimum flight altitudes.
9.1.3. The method for determining aerodrome operating minima.
9.1.4. En route Operating Minima for VFR Flights.
A description of en route operating minima for VFR flights or VFR portions of a flight and, where single-engine aircraft are used, instructions for route selection with respect to the availability of surfaces which permit a safe forced landing.
9.1.5. Presentation and Application of Airport and En route Operating Minima.
9.1.6. Interpretation of Meteorological Information.
Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.
9.1.7. Determination of the Quantities of Fuel, Oil, and Water Methanol Carried.The specific instructions and methods by which the quantities of fuel,

oil and water methanol to be carried are determined and monitored in flight. This section shall also include instructions on the measurement and distribution of the fluid carried on board. Such instructions shall take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight replanning and of failure of one or more of the aircraft's power plants, and possible loss of pressurisation. The system for maintaining fuel and oil records shall also be described.

Mass and Centre of Gravity.

9.1.8. The general principles of mass and centre of gravity including :

(*a*) The policy for using either standard and/or actual masses ;

(*b*) The method for determining the applicable passenger, baggage and cargo mass ;

(*c*) The applicable passenger and baggage masses for various types of operations and aircraft type ;

(*d*) General instruction and information necessary for verification of the various types of mass and balance documentation in use ;

(*e*) Last minute changes procedures ;

(*f*) Seating policy/procedures ; and

(*g*) List of documents, forms, and additional information to be carried during a flight.

9.2. GROUND HANDLING ARRANGEMENTS AND PROCEDURES

Fuelling Procedures.

9.2.1. A description of fuelling procedures, including :

(*a*) Safety precautions during refuelling and defueling including when an APU is in operation or when a turbine engine is running and, if applicable, the propeller brakes are on ;

(*b*) Refuelling and defueling when passengers are embarking, on board or disembarking ;

(*c*) Precautions to be taken to avoid mixing fuels ; and

(*d*) Method to ensure the required amount of fuel is loaded.

9.2.2. Aircraft, Passengers, and Cargo Handling Procedures Related To Safety.

A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the aircraft. Further procedures, aimed at achieving safety whilst the aircraft is on the ramp, shall also be given. Handling procedures shall include :

(*a*) Sick passengers and persons with reduced mobility ;

(*b*) Permissible size and weight of hand baggage ;

(*c*) Loading and securing of items in the aircraft ;

(*d*) Special loads and classification of load compartments (*i.e., dangerous goods, live animals, etc.*) ;

(*e*) Positioning of ground equipment ;
(*f*) Operation of aircraft doors ;
(*g*) Safety on the ramp, including fire prevention, blast and suction areas ;
(*h*) Start-up, ramp departure and arrival procedures ;
(*i*) Servicing of aircraft ;
(*j*) Documents and forms ;
(*k*) Multiple occupancy of aircraft seats.

9.2.3. Procedures for the Refusal of Embarkation.

Procedures to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of alcohol or drugs, except medical patients under proper care, are refused embarkation.

9.2.4. Deicing and Anti-Icing on the Ground.

Instructions for the conduct and control of ground de-icing/anti-icing operations. A description of the deicing and anti-icing policy and procedures for aircraft on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aircraft while stationary, during ground movements and during take-off. In addition, a description of the fluid types used shall be given including :

(*a*) Proprietary or commercial names ;
(*b*) Characteristics ;
(*c*) Effects on aircraft performance ;
(*d*) Precautions during usage.

Flight Procedures and Flight Navigation Equipment.

9.3. A description of flight procedures, including :

(*a*) Standard operating procedures (SOP) for each phase of flight.
(*b*) Instructions on the use of normal checklists and the timing of their use.
(*c*) Departure contingency procedures
(*d*) Instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call-outs.
(*e*) Instructions on the use of autopilots and auto-throttles in IMC.
(*f*) Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved.
(*g*) Departure and approach briefings.
(*h*) Procedures for familiarisation with areas, routes, and aerodromes
(*i*) Stabilized approach procedure.
(*j*) Limitation on high rates of descent near the surface.
(*k*) Conditions required to commence or to continue an instrument approach.

(*l*) Instructions for the conduct of precision and non-precision instrument approach procedures.

(*m*) Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations.

(*n*) The circumstances in which a radio listening watch is to be maintained.

(*o*) Instructions and training requirements for the use of head-up-displays (HUD) and enhanced vision systems (EVS) equipment as applicable.

9.3.1. A list of the navigational equipment to be carried including any requirements relating to operations where performance-based navigation is prescribed. Navigation Equipment.

9.3.2. A description of all navigation procedures relevant to the type(s) and area(s) of operation. Consideration shall be given to : Navigation Procedures.

(*a*) Standard navigational procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aircraft,

(*b*) In-flight replanning,

(*c*) Procedures in the event of system degradation,

(*d*) Where relevant to the operations, the long range navigation procedures, engine failure procedure for ETOPS and the nomination and utilisation of diversion aerodromes,

(*e*) Instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS).

(*f*) Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS).

(*g*) Information and instructions relating to the interception of civil aircraft including :

(1) Procedures, as prescribed in Nig. CARs Part 8, IS: 8.8.1.28, for pilots-in-command of intercepted aircraft ; and

(2) Visual signals for use by intercepting and intercepted aircraft, as contained in Nig. CARs Part 8, IS: 8.8.1.28.

(*h*) For aeroplanes intended to be operated above 49, 000 ft. (15,000 m)

(1) information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation ; and

(2) procedures in the event that a decision to descend is taken, covering :

(*i*) the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance ; and (*ii*) the action to be taken in the event that communication with ATS unit cannot be established or is interrupted.

9.3.3. Policy and Procedures for In-flight Fuel Management

Adverse and Potentially Hazardous Atmospheric Conditions.

9.3.4. Procedures for operating in, and/or avoiding, potentially hazardous atmospheric conditions including :

(*a*) Thunderstorms ;
(*b*) Icing conditions ;
(*c*) Turbulence ;
(*d*) Wind shear ;
(*e*) Jet stream ;
(*f*) Volcanic ash clouds ;
(*g*) Heavy precipitation ;
(*h*) Sand storms ;
(*i*) Mountain waves ; and
(*j*) Significant Temperature inversions.

Operating Restrictions.

9.3.5.—(*a*) Cold weather operations ;
(*b*) Take-off and landing in turbulence ;
(*c*) Low-level wind shear operations ;
(*d*) Cross-wind operations (including tail wind components) ;
(*e*) High temperature operations ;
(*f*) High altitude operations.

Incapacitation of Crew Members.

9.3.6. Procedures to be followed in the event of incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognising them shall be included.

Cabin Safety Requirements.

9.3.7. Procedures covering :

(*a*) Cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing cabin and galleys.

(*b*) Procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aircraft ;

(*c*) Procedures to be followed during passenger embarkation and disembarkation ; and

(*d*) Procedures for fuelling with passengers on board, embarking, or disembarking.

(*e*) Smoking on board ;

(*f*) Use of portable electronic equipment and cellular telephones.

Passenger Briefing Procedures.

9.3.8. The contents, means, and timing of passenger briefing.

9.3.9. Procedures for the use of cosmic or solar radiation detection equipment and for recording its readings including actions to be taken in the event that limit values specified in the operations manual are exceeded. In addition, the procedures, including ATC procedures, to be followed in the event that a decision to descend or re-route is taken.

Procedures for Use of Cosmic or Solar Radiation Detection Equipment - Aeroplanes.

9.4. ALL WEATHER OPERATIONS

9.5. USE OF THE MINIMUM EQUIPMENT AND CONFIGURATION DEVIATION LIST(S)

9.6. Procedures and limitations for :

Non Revenue Flights.

(*a*) Training flights ;
(*b*) Test flights ;
(*c*) Delivery flights ;
(*d*) Ferry flights ;
(*e*) Demonstration flights ; and
(*f*) Positioning flights, including the kind of persons who may be carried on such flights.

9.7. An explanation of the conditions under which oxygen shall be provided and used.

Oxygen Requirements.

10.0. DANGEROUS GOODS AND WEAPONS

10.1. Information, instructions and general guidance on the transport of dangerous goods including :

Transport of Dangerous Goods.

(*a*) AOC holder's policy on the transport of dangerous goods ;
(*b*) Guidance on the requirements for acceptance, labelling, handling, stowage and segregation of dangerous goods ;
(*c*) Procedures and actions to be taken for responding to emergency situations involving dangerous goods ;
(*d*) Duties of all personnel involved ; and
(*e*) Instructions on the carriage of the AOC holder's employees.

10.2. The conditions under which weapons, munitions of war and sporting weapons may be carried.

Transport of Weapons.

11.0. SECURITY

11.1. A description of security policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, bomb threats, and hijacking.

Security Policies and Procedures.

11.2. Security instructions and guidance of a non-confidential nature which shall include the authority and responsibilities of operations personnel.

Security Instructions and Guidance.

Preventative Security Measures and Training.

11.3. A description of preventative security measures and training.

Note : Parts of the security instructions and guidance may be kept confidential.

Handling of Accidents and Occurrences.

12.0. (*a*) Procedures for the handling, notifying and reporting of accidents and occurrences. This section shall include :

(*b*) Definitions of accidents and occurrences and the relevant responsibilities of all persons involved ;

(*c*) The descriptions of which company departments, Authorities or other institutions have to be notified by which means and in which sequence in case of an accident ;

(*d*) Special notification requirements in the event of an accident or occurrence when dangerous goods are being carried ;

(*e*) A description of the requirements to report specific occurrences and accidents ;

(*f*) The forms used for reporting and the procedure for submitting them to the Authority shall also be included ; and

(*g*) If the AOC holder develops additional safety related reporting procedures for its own internal use, a description of the applicability and related forms to be used.

(*h*) Procedures for pilots-in-command observing an accident.

Rules of the Air.

13.0. Rules of the Air including :

(*a*) Territorial application of the Rules of the Air ;

(*b*) The circumstances during which a radio listening watch shall be maintained ;

(*c*) ATC clearances, adherence to flight plan and position reports ;

(*d*) The ground/air visual codes for use by survivors, description and use of signal aids ; and

(*e*) Distress and urgency signals.

Safety Management System (SMS).

14.0. Details of the Safety Management System.

Training Programmes Manual.

IS: 9.3.1.3.—(a) Each AOC holder and AOC applicant may submit and maintain training programme manuals based on the following outline :

1.0. TRAINING SYLLABI AND CHECKING PROGRAMMES

General Requirements.

1.1. (*a*) Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight shall be developed to meet the respective requirements of the Authority. An AOC holder may not use, nor may any person serve in a required crewmember capacity or operational capacity unless that person meets the training and currency requirements established by the Authority for that respective position.

1.2. The training syllabi and checking programmes for flight crew members shall include : Flight Crew.

(*a*) A written training programme acceptable to the Authority that provides for basic indoctrination, initial, transition, re-qualification familarisation difference, and recurrent training, as appropriate, for flight deck crew members for each type of aircraft flown by that crew member. This written training programme shall include both normal and emergency procedures training applicable for each type of aircraft flown by the crewmember. Also, human factor, CRM, safety management and other specialized training that is acceptable to the Authority.

(*b*) Adequate ground and flight training facilities and properly qualified instructors required to meet training objectives and needs.

(*c*) A current list of approved training materials, equipment, training devices, simulators, and other required training items needed to meet the training needs for each type and variation of aircraft flown by the AOC holder.

(*d*) Adequate number of ground check personnel and flight check pilots to ensure adequate training and checking of flight crew members.

(*e*) A record system acceptable to the Authority to show compliance with appropriate training and currency requirements

1.3. The training syllabi and checking programmes for cabin crew members shall include : Cabin Crew.

(*a*) Basic initial ground training covering duties and responsibilities.

(*b*) Appropriate Authority rules and regulations.

(*c*) Appropriate portions of the AOC holder's operating manual.

(*d*) Appropriate emergency training as required by the Authority and the AOC holder's operating manual.

(*e*) Appropriate flight training.

(*f*) Appropriate recurrent, upgrade, or difference training, as required, to maintain currency in any type and variance of aircraft the crew member may be required to work in.

(*g*) A current list of approved training materials, equipment, training devices, simulators, and other required training items needed to meet the training needs for each type and variation of aircraft flown by the AOC holder.

(*h*) Adequate number of ground check personnel and flight check personnel to ensure adequate training and checking of crew members, and (*i*) Maintain a training record system acceptable to the Authority to show compliance with all required training.

All Crew Members.

1.4. A written training programme shall be developed for all crew members in the emergency procedures appropriate to each make and model of aircraft flown in by the crew member. Areas shall include :

(*a*) Instruction in emergency procedures, assignments, and crew co-ordination.

(*b*) Individual instruction in the use of onboard emergency equipment such as fire extinguishers, emergency breathing equipment, first aid equipment and its proper use, emergency exits and evacuation slides, and the aircraft's oxygen system including the use of portable emergency oxygen bottles. Flight crew members shall also practice using their emergency equipment designed to protect them in case of a cockpit fire or smoke.

(*c*) Training shall also include instruction in potential emergencies such as rapid decompression, ditching, fire fighting, aircraft evacuation, medical emergencies, hijacking, and disruptive passengers.

(*d*) Scheduled recurrent training to meet Authority requirements.

All Operations Personnel.

1.5. The training syllabi and checking programmes for all operations personnel shall include :

(*a*) Training in the safe transportation and recognition of all dangerous goods permitted by the Authority to be shipped by air. Training shall include the proper packaging, marking, labelling, and documentation of dangerous articles and magnetised materials.

(*b*) All appropriate security training required by the Authority.

(*c*) A method of providing any required notification of an accident or incident involving dangerous good.

Operations Personnel Other Than Crew Members.

1.6. For operations personnel other than crew members (e.g., flight operations officer, handling personnel etc.), a written training programme shall be developed that pertains to their respective duties. The training programme shall provide for initial, recurrent, and any required upgrade training.

2.0. PROCEDURES FOR TRAINING AND CHECKING

Proficiency Checking Procedures.

2.1. (a) Procedures to be applied in the event that personnel do not achieve or maintain the required standards.

Procedures Involving the Simulation of Abnormal or Emergency Situations.

2.2. Procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures, and simulation of IMC by artificial means, are not simulated during commercial air transportation flights.

3.0. DOCUMENT RETENTION

3.1. An AOC holder shall retain all documentation required by the appropriate Authority, or the Authority of another State in which the AOC holder is operating for the time specified by the respective Authority, or for the time period needed to show compliance with appropriate regulations or this operations manual, whichever is longer.

Documentation to be Stored and Storage Periods.

IS: 9.3.1.4—(a) Each AOC applicant and AOC holder shall submit and maintain an aircraft operating manual containing at least the following.

Aircraft Operating Manual.

1.0. General Information (e.g., aircraft dimensions), including a description of the units of measurement used for the operation of the aircraft type concerned and conversion tables.

General Information and Units of Measurement.

2.0. LIMITATIONS

2.1. A description of the certified limitations and the applicable operational limitations including :

Certification and Operational Limitations.

(*a*) Certification status ;
(*b*) Passenger seating configuration for each aircraft type including a pictorial presentation ;
(*c*) Types of operation that are approved (e.g. IFR/VFR, CAT II/III, flights in known icing conditions etc.) ;
(*d*) Crew composition ;
(*e*) Operating within mass and centre of gravity limitations ;
(*f*) Speed limitations ;
(*g*) Flight envelopes ;
(*h*) Wind limits including operations on contaminated runways ;
(*i*) Performance limitations for applicable configurations ;
(*j*) Runway slope ;
(*k*) Limitations on wet or contaminated runways ;
(*l*) Airframe contamination ; and
(*m*) Post landing.

3.0. The normal procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary co-ordination procedures between flight and cabin crew. The following normal procedures and duties shall be included :

Normal Procedures.

(*a*) Pre-flight ;
(*b*) Pre-departure and loading ;
(*c*) Altimeter setting and checking ;
(*d*) Taxi, Take-off and Climb ;
(*e*) Noise abatement ;
(*f*) Cruise and descent ;

(*g*) Approach, landing preparation and briefing ;
(*h*) VFR approach ;
(*i*) Instrument approach ;
(*j*) Visual approach and circling ;
(*k*) Missed approach ;
(*l*) Normal landing ;
(*m*) Post landing ; and
(*n*) Operation on wet and contaminated runways.

Specific Flight Deck Procedures.

3.1.—(*a*) Determining airworthiness of aircraft ;
(*b*) Obtaining flight release ;
(*c*) Initial cockpit preparation ;
(*d*) Standard operating procedures ;
(*e*) Cockpit discipline ;
(*f*) Standard call-outs ;
(*g*) Communications ;
(*h*) Flight safety ;
(*i*) Push-back and towing procedures ;
(*j*) Taxi guidelines and ramp signals ;
(*k*) Take-off and climb out procedures ;
(*l*) Choice of runway ;
(*m*) Take-off in limited visibility ;
(*n*) Take-off in adverse weather ;
(*o*) Use and limitations of weather radar ;
(*p*) Use of landing lights ;
(*q*) Monitoring of flight instruments ;
(*r*) Power settings for take-off ;
(*s*) Malfunctions during take-off ;
(*t*) Rejected take-off decision ;
(*u*) Climb, best angle, best rate ;
(*v*) Sterile cockpit procedures ;
(*w*) En route and holding procedures ;
(*x*) Cruise control ;
(*y*) Navigation log book ;
(*z*) Descent, approach and landing procedures ;
(*aa*) Reporting maintenance problems ;
(*bb*) How to obtain maintenance and service en route.

4.0. ABNORMAL AND EMERGENCY PROCEDURES

4.1. The manual shall contain a listing of abnormal and emergency procedures assigned to crew members with appropriate check-lists that include a system for use of the check-lists and a statement covering the necessary co-ordination procedures between flight and cabin crew. The following abnormal and emergency procedures and duties shall be included :

(*a*) Crew incapacitation ;
(*b*) Fire and smoke drills ;
(*c*) Unpressurised and partially pressurised flight ; as applicable ;
(*d*) Exceeding structural limits such as overweight landing ;
(*e*) Exceeding cosmic radiation limits; as applicable ;
(*f*) Lightning strikes ;
(*g*) Distress communications and alerting ATC to emergencies ;
(*h*) Engine failure ;
(*i*) System failures;
(*j*) Guidance for diversion in case of serious technical failure ;
(*k*) Ground proximity warning ;
(*l*) ACAS warning ;
(*m*) Windshear ; and
(*n*) Emergency landing/ditching ;
(*o*) Aircraft evacuation ;
(*p*) Fuel Jettisoning (as applicable) and Overweight Landing ;
(*q*) General considerations and policy ;
(*r*) Fuel jettisoning procedures and precautions ;
(*s*) Emergency Procedures ;
(*t*) Emergency descent ;
(*u*) Low fuel ;
(*v*) Dangerous goods incident or accident ;
(*w*) Interception procedures ;
(*x*) Emergency signal for cabin crew members ;
(*y*) Communication Procedures ;
(*z*) Radio listening watch.

Performance Data.

5.0. Performance data shall be provided in a form in which it can be used without difficulty.

Performance Data.

5.1. Performance material which provides the necessary data to allow the flight crew to comply with the approved aircraft flight manual performance requirements shall be included to allow the determination of—

(*a*) Take-off climb limits-Mass, Altitude, Temperature ;
(*b*) Take-off field length limits (dry, wet, contaminated) ;

(*c*) Net flight path data for obstacle clearance calculation or, where applicable, take-off flight path ;

(*d*) The gradient losses for banked climb outs ;

(*e*) En route climb limits ;

(*f*) Approach climb limits ;

(*g*) Landing climb limits ;

(*h*) Landing field length limits (dry, wet, contaminated) including the effects of an in-flight failure of a system or device, if it affects the landing distance ;

(*i*) Brake energy limits ; and

(*j*) Speeds applicable for the various flight stages (*also considering wet or contaminated runways*).

Supplementary Performance Data.

5.1.1. Supplementary data covering :

(*a*) Flights in icing conditions.

(*b*) The maximum crosswind and tailwind components for each aeroplane type operated and the reductions to be applied to these values having regard to gust, low visibility, runway surface conditions, crew experience, use of autopilot, abnormal or emergency circumstances, or any other relevant operational factors.

(*c*) Any certified performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative, shall be included.

Other Acceptable Performance Data.

5.1.2. If performance data, as required for the appropriate performance class, is not available in the approved AFM, then other data acceptable to the Authority shall be included. Alternatively, the operations manual may contain cross-reference to the approved data contained in the AFM where such data is not likely to be used often or in an emergency.

Additional Performance Data.

5.2. Additional performance data where applicable including :

(*a*) All engine climb gradients ;

(*b*) Drift-down data ;

(*c*) Effect of deicing/anti-icing fluids ;

(*d*) Flight with landing gear down ;

(*e*) For aircraft with 3 or more engines, one engine inoperative ferry flights ; and

(*f*) Flights conducted under the provisions of a configuration deviation list (CDL).

6.0. FLIGHT PLANNING

6.1. Specific data and instructions necessary for pre-flight and in-flight planning including factors such as speed schedules and power settings. Where applicable, procedures for engine(s) out operations, ETOPS and flights to isolated airports shall be included for the flight plan and the operational flight plan.

Fuel and Oil Calculations.

6.2. The method for calculating fuel needed for the various stages of flight.

Calculating Mass and Balance.

7.0. MASS AND BALANCE

7.1. Instructions and data for the calculation of mass and balance including:

(*a*) Calculation system (e.g. Index system) ;

(*b*) Information and instructions for completion of mass and balance documentation, including manual and computer generated types ;

(*c*) Limiting mass and centre of gravity of the various versions ;

(*d*) Dry operating mass and corresponding centre of gravity or index.

Loading Procedures.

8.0. LOADING

8.1. Instructions for loading and securing the load in the aircraft ;

Loading Dangerous Goods.

(*a*) Use of aircraft systems and associated controls.

8.2. The operations manual shall contain a method to notify the PIC when dangerous goods are loaded in the aircraft.

List of Survival Equipment to be Carried.

9.0. SURVIVAL AND EMERGENCY EQUIPMENT INCLUDING OXYGEN

9.1.—(*a*) A list of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list(s) shall also be included.

Ground - Air Visual Signal .

9.2. Instructions illustrating the ground-air visual signal code for use by survivors shall also be included.

Oxygen Usage.

9.3. The procedure for determining the amount of oxygen required and the quantity that it available. The flight profile, number of occupants and possible cabin decompression shall be considered. The information provided shall be in a form in which it can be used without difficulty.

Emergency Equipment Usage.

9.4. A description of the proper use of the following emergency equipment, if applicable :

(*b*)

(*c*) Life jackets ;

(*d*) Life rafts ;

(*e*) Medical kits/first aid kits ;

(*f*) Survival kits ;
(*g*) Emergency locator transmitter (ELT) ;
(h) Visual signalling devices ;
(*i*) Evacuation slides ;
(*j*) Emergency lighting.

10.0. EMERGENCY EVACUATION PROCEDURES

Instructions for Emergency Evacuation.

10.1. Instructions for preparation for emergency evacuation including crew co-ordination and emergency station assignment.

Emergency Evacuation Procedures.

10.2. A description of the duties of all members of the crew for the rapid evacuation of an aircraft and the handling of the passengers in the event of a forced landing, ditching or other emergency.

11.0. AIRCRAFT SYSTEMS

Aircraft Systems.

11.1. A description of the aircraft systems, related controls and indications and operating instructions.

Minimum Equipment List and Configuration Deviation List.

12.0. The minimum equipment list and configuration deviation list for the aeroplane types operated and specific operations authorised, including any requirements relating to operations where performance-based navigation is prescribed.

13.0. ROUTE AND AIRPORT INSTRUCTIONS AND INFORMATION (OPTIONAL FOR THIS MANUAL)

Instructions and Information.

13.1. Instructions and information relating to communications, navigation and airports, including :

(*a*) Minimum flight level/altitude for each route to be flown ;
(*b*) Operating minima for departure, destination and alternate airports ;
(*c*) Communication facilities and navigation aids ;
(*d*) Runway data and airport facilities ;
(*e*) Approach, missed approach and departure procedures including noise abatement procedures ;
(*f*) Communications-failure procedures ;
(*g*) Search and rescue facilities in the area over which the aircraft is to be flown ;
(*h*) A description of the aeronautical charts that shall be carried on board in relation to the type of flight and the route to be flown, including the method to check their validity ;
(*i*) Availability of aeronautical information and MET services ;

(*j*) En route COM/NAV procedures, including holding ;

(*k*) Airport categorisation for flight crew competence qualification.

IS : 9.3.1.18—(*a*) Each AOC holder shall, at each exit seat, provide passenger information cards that include the following information in the primary language in which emergency commands are given by the crew :

(1) Functions required of a passenger in the event of an emergency in which a crew member is not available to assist, including how to—

(*i*) Locate the emergency exit ;

(*ii*) Recognise the emergency exit opening mechanism ;

(*iii*) Comprehend the instructions for operating the emergency exit ;

(*iv*) Operate the emergency exit ;

(*v*) Assess whether opening the emergency exit will increase the hazards to which passengers may be exposed ;

(*vi*) Follow oral directions and hand signals given by a crew member ;

(*vii*) Stow or secure the emergency exit door so that it will not impede use of the exit ;

(*viii*) Assess the condition of an escape slide, activate the slide, and stabilise the slide after deployment to assist others in getting off the slide ;

(*ix*) Pass expeditiously through the emergency exit ; and

(*x*) Assess, select, and follow a safe path away from the emergency exit.

(2) A request that a passenger identify himself or herself to allow reseating if he or she—

(*i*) Cannot perform the emergency functions stated in the information card ;

(*ii*) Has a nondiscernible condition that will prevent him or her from performing the functions ;

(*iii*) May suffer bodily harm as the result of performing one or more of those functions ;

(*iv*) Does not wish to perform those functions ; or

(*v*) Lacks the ability to read, speak, or understand the language or the graphic form in which instructions are provided by the AOC holder.

Aeronautical Data Control System.

IS: 9.3.1.19—(*a*) Each AOC holder shall provide aeronautical data for each airport used by the AOC holder which includes the following :

(1) Aerodromes/heliports.

(*i*) Facilities.

(*ii*) Public protection.

(*iii*) Navigational and communications aids.

(*iv*) Construction affecting take-off, landing, or ground operations.

(*v*) Air traffic facilities.

(2) Runways, clearways, and stopways :
(*i*) Dimensions.
(*ii*) Surface.
(*iii*) Marking and lighting systems.
(*iv*) Elevation and gradient.

(3) Displaced thresholds :
(*i*) Location.
(*ii*) Dimensions.
(*iii*) Take-off or landing or both.

(4) Obstacles—
(*i*) Those affecting take-off and landing performance computations.
(*ii*) Controlling obstacles.

(5) Instrument flight procedures.
(*i*) Departure procedure.
(*ii*) Approach procedure.
(*iii*) Missed approach procedure.

(6) Special information :
(*i*) Runway visual range measurement equipment.
(*ii*) Prevailing winds under low visibility conditions

Route Guide.

IS: 9.3.1.20—(*a*) The route guide will ensure that the flightcrew will have for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary in the proper conduct of flight operations.

(*b*) Each route guide shall contain at least the following information :

(1) The minimum flight altitudes for each aircraft to be flown

(2) Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes.

(3) The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities.

(4) The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of :

(*i*) Take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by systems failures which affect the take-off distance ;

(*ii*) Take-off climb limitations :

(*iii*) En-route climb limitations ;

(*iv*) Approach climb limitations and landing climb limitations ;

(*v*) Landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance ; and

(*vi*) Supplementary information, such as tire speed limitations.

IS: 9.3.1.21—(a) The Authority approves and considers the following sources of weather reports satisfactory for flight planning or controlling flight movement :

Weather Reporting Sources.

(1) [STATE METEOROLOGICAL OFFICE].

(2) Nigeria-operated automated surface observation stations.

Note : Some automated systems cannot report all required items for a complete surface aviation weather report.

(3) Nigeria-operated supplemental aviation weather reporting stations.

(4) Observations taken by airport traffic control towers.

(5) Nigeria-contracted weather observatories.

(6) Any active meteorological office operated by a foreign state which subscribes to the standards and practices of ICAO conventions.

Note : These meteorological offices are normally listed in the MET tables located in ICAO Regional Air Navigation Plans.

(7) Any military weather reporting sources approved by the Authority.

Note : Use of military sources is limited to control of those flight operations which use military airports as departure, destination, alternate, or diversionary airports.

(8) Near real time reports such as pilot reports, radar reports, radar summary charts, and satellite imagery reports made by commercial weather sources or other sources specifically approved by the Authority.

(9) An AOC holder operated and maintained weather reporting system approved by the Authority.

IS: 9.3.1.22—(*a*) Contents of the AOC holder's ground deicing and anti-icing programme shall include a detailed description of—

Deicing and Anti-icing Programme.

(1) How the AOC holder determines that conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft and that ground deicing and anti-icing operational procedures shall be in effect ;

(2) Who is responsible for deciding that ground deicing and anti-icing operational procedures shall be in effect ;

(3) The procedures for implementing ground deicing and anti-icing operational procedures ; and

(4) The specific duties and responsibilities of each operational position or group responsible for getting the aircraft safely airborne while ground deicing and anti-icing operational procedures are in effect.

(*b*) Initial and annual recurrent ground training for flight crew and all other affected personnel (e.g. dispatchers/flight operations officers, ground crews, contract personnel) concerning the specific requirements of the approved programme and each person's responsibilities and duties under the approved programme specifically covering the following areas :

(1) The use of holdover timesn ;

(2) Aircraft deicing/anti-icing procedures including inspection and check procedures and responsibilities ;

(3) Communication procedures ;

(4) Aircraft surface contamination (i.e., adherence of frost, ice or snow) and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics ;

(5) Types and characteristics of deicing/anti-icing fluids ;

(6) Cold weather pre-flight inspection procedures ; and

(7) Techniques for recognising contamination on the aircraft.

(*c*) The AOC holder's programme shall include procedures for flight crew members to increase or decrease the determined holdover time in changing conditions. The holdover time shall be supported by data acceptable to the Authority. If the maximum holdover time is exceeded, take-off is prohibited unless at least one of the following conditions exists—

(1) A pre-take-off contamination check is conducted outside the aircraft (within five minutes prior to beginning take-off) to determine that the wings, control surfaces, and other critical surfaces, as defined in the AOC holder's programme, are free of frost, ice, or snow ;

(2) It is otherwise determined by an alternate procedure, approved by the Authority and in accordance with the AOC holder's approved programme, that the wings, control surfaces, and other critical surfaces are free of frost, ice, or snow ; or

(3) The wings, control surfaces, and other critical surfaces are de-iced again and a new holdover time is determined.

Flight Monitoring System.

IS: 9.3.1.23.—(*a*) Each AOC holder shall have an approved flight following system established and adequate for the proper monitoring of each flight, considering the operations to be conducted.

(*b*) For AOC holders having flight following centres, these centres shall be located at those points necessary to ensure—

(1) The proper monitoring of the progress of each flight with respect to its departure at the point of origin and arrival at its destination, including intermediate stops and diversions ; and

(2) That the PIC is provided with all information necessary for the safety of the flight.

(*c*) An AOC holder conducting charter operations may arrange to have flight following facilities provided by persons other than its employees, but in such a case the AOC holder continues to be primarily responsible for operational control of each flight.

(*d*) Each AOC holder conducting charter operations using a flight following system shall show that the system has adequate facilities and personnel to provide the information necessary for the initiation and safe conduct of each flight to—

(1) The flight crew of each aircraft ; and

(2) The persons designated by the certificate holder to perform the function of operational control of the aircraft.

(*e*) Each AOC holder conducting charter operations shall show that the personnel required to perform the function of operational control are able to perform their duties.

Fatigue Management System Requirements.

IS: 9.3 1. 24.—(*a*) A Fatigue Risk Management System (FRMS) shall contain as a minimum :

(1) FRMS policy and documentation.

(2) Fatigue risk management processes.

(3) FRMS safety assurance process.

(4) FRMS promotion processes

(*b*) The operator shall define its FRMS policy, with all elements of the FRMS clearly identified.

(*c*) The policy shall require that the scope of FRMS operations be clearly defined in the Operations Manual.

(*d*) The FRMS policy shall :

(1) Reflect the shared responsibility of management, flight and cabin crews, and other involved personnel ;

(2) Clearly state the safety objectives of the FRMS ;

(3) Be signed by the accountable executive of the organisations ;

` (4) Be communicated, with visible endorsement, to all the relevant areas and levels of the organisation ;

(5) Declare management commitment to effective safety reporting ;

(6) Declare management commitment to the provision of adequate resources for the FRMS ;

(7) Declare management commitment to continuous improvement of the FRMS ;

(8) Require that clear lines of accountability for management, flight and cabin crews, and all other involved personnel are identified ; and

(9) Require periodic reviews to ensure it remains relevant and appropriate.

Note : Effective safety reporting is described in Doc 9859, Safety Management Manual (SMM)

(*e*) FRMS documentation.

(1) An operator shall develop and keep current FRMS documentation that describes and records :

(*i*) FRMS policy and objectives ;

(*ii*) FRMS processes and procedures ;

(*iii*) Accountabilities, responsibilities and authorities for these processes and procedures ;

(*iv*) Mechanisms for ongoing involvement of management, flight and cabin crew members, and all other involved personnel ;

(*v*) FRMS training programmes, training requirements and attendance records ;

(*vi*) Scheduled and actual flight times, duty periods and rest periods with significant deviations and reasons for deviations noted ; and

Note : Significant deviations are described in the FRMS Manual (Doc 9966)

(*vii*) FRMS outputs including findings from collected data, recommendations and actions taken.

(*f*) Fatigue Risk Management Processes –Identification of hazards, an operator shall develop and maintain three fundamental and documented processes for fatigue hazard identification :

(1) *Predictive.*—The predictive process shall identify fatigue hazards by examining crew scheduling and taking into account factors known to affect sleep and fatigue and their effects on performance. Methods of examination may include but are not limited to :

(*i*) Operator or industry operational experience and data collected on similar types of operations ;

(*ii*) Evidence-based scheduling practices ; and

(*iii*) Bio-mathematical models.

(2) *Proactive.*—The proactive process shall identify fatigue hazards within current flight operations. Methods of examination may include but are not limited to :

(*i*) Self-reporting of fatigue risks ;

(*ii*) Crew fatigue surveys ;

(*iii*) Relevant flight and cabin crew performance data ;

(*iv*) Available safety databases and scientific studies ; and

(*v*) Analysis of planned versus actual time worked.

(3) *Reactive.*—The reactive process shall identify the contribution of fatigue hazards to reports and events associated with potential negative safety consequences in order to determine how the impact of fatigue could have been minimised. At a minimum, the process may be triggered by any of the following :

(*i*) Fatigue reports ;
(*ii*) Confidential reports ;
(*iii*) Audit reports ;
(*iv*) Incidents ; and
(*v*) Flight data analysis events.

(*g*) Risk assessment.

(1) An operator shall develop and implement risk assessment procedures that determine the probability and potential severity of fatigue-related events and identify when the associated risks require mitigation. The risk assessments procedures shall review identified hazards and link them to :
(*i*) Operational processes ;
(*ii*) Their probability ;
(*iii*) Possible consequences ; and
(*iv*) The effectiveness of existing safety barriers and controls.

(*h*) Risk mitigation.
(1) An operator shall develop and implement risk mitigation procedures that :
(*i*) Select the appropriate mitigation strategies ;
(*ii*) Implement the mitigation strategies ; and
(*iii*) Monitor the strategies implementation and effectiveness.

(*i*) FRMS Safety Assurance Process.—The operator shall develop and maintain FRMS safety assurance process to :
(1) Provide for continuous FRMS performance monitoring, analysis of trend, and measurement to validate the effectiveness of the fatigue safety risk controls. The sources of data may include, but are not limited to :
(*i*) Hazard reporting and investigations ;
(*ii*) Audits and surveys ; and
(*iii*) Reviews and fatigue studies ;

(2) Provide a formal process for the management of change which shall include but is not limited to :
(*i*) Identification of changes in the operational environment that may affect FRMS ;
(*ii*) Identification of changes within the organisation that may affect FRMS ; and

(*iii*) Consideration of available tools which could be used to maintain or improve FRMS performance prior to implementing changes ; and

(3) Provide for the continuous improvement of the FRMS. This shall include but is not limited to :

(*i*) The elimination and/or modification of risk controls have had unintended consequences or that are no longer needed due to changes in the operational or organisational environment ;

(*ii*) Routine evaluations of facilities, equipment, documentation and procedures ; and

(*iii*) The determination of the need to introduce new processes and procedures to mitigate emerging fatigue-related risks.

(*j*) FRMS Promotion Process.—support the ongoing development of the FRMS, the continuous improvement of its overall performance, and attainment of optimum safety levels. The following shall be established and implemented by the operator as part of its FRMS :

(1) Training programmes to ensure competency commensurate with the roles and responsibilities of management, flight and cabin crew, and all other involved personnel under the planned FRMS ; and

(2) An effective FRMS communications plan that :

(*i*) Explains FRMS policies, procedures and responsibilities to all relevant stakeholders ; and

(*ii*) Describes communication channels used to gather and disseminate FRMS-related information.

Maintenance Control Manual.

IS: 9.4.1.4.—(*a*) Each AOC applicant and AOC holder shall submit and maintain a maintenance control manual containing at least the following.

Note : The manual may be put together in any subject order and subjects combined so long as all applicable subjects are covered in this manual.

1.0. ADMINISTRATION AND CONTROL OF THE MAINTENANCE CONTROL MANUAL

Introduction.

1.1. —(*a*) A statement that the manual complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable Air Operator Certificate.

(*b*) A statement that the manual contains maintenance and operational instructions that are to be complied with by the relevant personnel in the performance of their duties.

(*c*) A list and brief description of the various Maintenance Control Manual parts, their contents, applicability and use.

(*d*) Explanations and definitions of terms and words used in the manual.

1.2.—(*a*) A Maintenance Control Manual shall describe who is responsible for the issuance and insertion of amendments and revisions.

System of Amendment and Revision.

(*b*) A record of amendments and revisions with insertion dates and effective dates is required.

(*c*) A statement that hand-written amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.

(*d*) A description of the system for the annotation of pages and their effective dates.

(*e*) A list of effective pages and their effective dates.

(*f*) Annotation of changes (on text pages and as practicable, on charts and diagrams).

(*g*) A system for recording temporary revisions.

(*h*) A description of the distribution system for the manuals, amendments and revisions.

(*i*) A statement of who is responsible for notifying the Authority of proposed changes and working with the Authority on changes requiring Authority approval.

2.0. General Organisation

2.1. Corporate Commitment by the AOC

General Information.

2.2.—(*a*) Brief description of organisation.
(*b*) Relationship with other organisations.
(*c*) Fleet composition.
(*d*) Type of operation.
(*e*) Line station locations.

2.3. (*a*) Accountable manager.

Maintenance Management Personnel.

(*b*) Nominated post holder.
(*c*) Maintenance co-ordination.
(*d*) Duties and responsibilities.
(e) Organisation chart(s).
(*f*) Manpower resources and training policy.

2.4. Notification Procedure to the Authority Regarding Changes to the Maintenance Arrangements Locations, Personnel, Activities, or Approval.

3.0. Maintenance Procedures

3.1. Aircraft Logbook Utilisation and MEL Application

3.2. Aircraft Maintenance Programme Development and Amendment.

3.3. Time and Maintenance Records, Responsibilities, Retention.

Defect Reports.

3.4. Accomplishment and Control of Mandatory Continued Airworthiness Information (*Airworthiness Directives*).

3.5. Analysis of the Effectiveness of the Maintenance Programme.

3.6. Non-mandatory Modification Embodiment Policy.

Reliability Programmes.

3.7. Major Modification Standards.

3.8.—(*a*) Analysis.
(*b*) Liaison with manufacturers and Regulatory Authorities.
(*c*) Deferred defect policy.

3.9. Engineering Activity.

3.10.—(*a*) Airframe.
(*b*) Propulsion.
(*c*) Components.

3.11.—(*a*) Preparation of aircraft for flight.
(*b*) Subcontracted ground handling functions.
(*c*) Security of cargo and baggage loading.
(*d*) Control of refuelling, Quantity/Quality.
(*e*) Control of snow, ice, dust and sand contamination to an approved aviation standard.

Ageing Airplane Inspections And Records Reviews.

3.12. Aircraft Weighing.
3.13. Flight Test Procedures.
3.14. Sample of Documents, Tags and Forms Used.
3.15. Appropriate portions of the AOC holder's operations manual.
3.16. Appropriate portions of the AMO Procedures manual in IS 6.5.1.1 for equivalent system of maintenance.

IS 9.4.1.17.(B)—(*a*) *Applicability*. This section applies to all airplanes operated by an AOC holder under part 9 of this regulation.

(*b*) *Operation after inspection and records review*. After the dates specified in this paragraph, an AOC holder may not operate an airplane under part 9 unless the Authority has notified the AOC holder that the Authority has completed the aging airplane inspection and records review required by this section. During the inspection and records review, the AOC holder must demonstrate to the Authority that the maintenance of age-sensitive parts and components of the airplane has been adequate and timely enough to ensure the highest degree of safety.

(1) Airplanes exceeding 24 years in service on December 8, 2003 ; initial and repetitive inspections and records reviews. For an airplane that has

exceeded 24 years in service on December 8, 2003, no later than December 5, 2007, and thereafter at intervals not to exceed 7 years.

(2) Airplanes exceeding 14 years in service but not 24 years in service on December 8, 2003; initial and repetitive inspections and records reviews. For an airplane that has exceeded 14 years in service but not 24 years in service on December 8, 2003, no later than December 4, 2008, and thereafter at intervals not to exceed 7 years.

(3) Airplanes not exceeding 14 years in service on December 8, 2003 ; initial and repetitive inspections and records reviews. For an airplane that has not exceeded 14 years in service on December 8, 2003, no later than 5 years after the start of the airplane's 15th year in service and thereafter at intervals not to exceed 7 years.

(*c*) *Unforeseen schedule conflict*.—In the event of an unforeseen scheduling conflict for a specific airplane, the Authority may approve an extension of up to 90 days beyond an interval specified in paragraph (b) of this section.

(*d*) *Airplane and records availability*.—The AOC holder must make available to the Authority each airplane for which an inspection and records review is required under this section, in a condition for inspection specified by the Authority, together with records containing the following information :

(1) Total years in service of the airplane ;

(2) Total time in service of the airframe ;

(3) Total flight cycles of the airframe ;

(4) Date of the last inspection and records review required by this section ;

(5) Current status of life-limited parts of the airframe ;

(6) Time since the last overhaul of all structural components required to be overhauled on a specific time basis ;

(7) Current inspection status of the airplane, including the time since the last inspection required by the inspection program under which the airplane is maintained ;

(8) Current status of applicable airworthiness directives, including the date and methods of compliance, and if the airworthiness directive involves recurring action, the time and date when the next action is required ;

(9) A list of major structural alterations ; and

(10) A report of major structural repairs and the current inspection status for those repairs.

(*e*) *Notification to Authority*.—Each AOC holder must notify the Authority at least 60 days before the date on which the airplane and airplane records will be made available for the inspection and records review.

Repairs Assessment For Pressurized Fuselages.

IS: 9.4.1.17.(C)—(*a*) No AOC holder may operate an Airbus Model A300 (excluding the -600 series), British Aerospace Model BAC 1-11, Boeing Model 707, 720, 727, 737, or 747, McDonnel Douglas Model DC-8, DC-9/MD-80 or DC-10, Fokker Model F28, or Lockheed Model L-1011 airplane beyond the applicable flight cycle implementation time specified below, or May 25, 2001, whichever occurs later, unless a repair assessment guidelines applicable to the fuselage pressure boundary (fuselage skin, door skin, and bulkhead webs) are incorporated in its maintenance program. The repair assessment guidelines must have been approved by the State of Design having cognizance over the type certificate for the affected airplane.

(1) For the Airbus Model A300 (excluding the-600 series), the flight cycle implementation time is :

(*i*) Model B2: 36,000 flights.

(*ii*) Model B4-100 (including Model B4-2C) : 30,000 flights above the window line, and 36,000 flights below the window line.

(*iii*) Model B4-200 : 25,500 flights above the window line, and 34,000 flights below the window line.

(2) For all models of the British Aerospace BAC 1-11, the flight cycle implementation time is 60,000 flights.

(3) For all models of the Boeing 707, the flight cycle implementation time is 15,000 flights.

(4) For all models of the Boeing 720, the flight cycle implementation time is 23,000 flights.

(5) For all models of the Boeing 727, the flight cycle implementation time is 45,000 flights.

(6) For all models of the Boeing 737, the flight cycle implementation time is 60,000 flights.

(7) For all models of the Boeing 747, the flight cycle implementation time is 15,000 flights.

(8) For all models of the McDonnell Douglas DC-8, the flight cycle implementation time is 30,000 flights.

(9) For all models of the McDonnell Douglas DC-9/MD-80, the flight cycle implementation time is 60,000 flights.

(10) For all models of the McDonnell Douglas DC-10, the flight cycle implementation time is 30,000 flights.

(11) For all models of the Lockheed L-1011, the flight cycle implementation time is 27,000 flights.

(12) For the Fokker F-28 Mark 1000, 2000, 3000, and 4000, the flight cycle implementation time is 60,000 flights.

Supplemental Inspections.

IS 9.4.1.17.(D)—(*a*) *General requirements*.—After December 20, 2010, an AOC holder may not operate an airplane having a maximum type certificated passenger seating capacity of 30 or more; or a maximum certificated takeoff mass of 7,500 pounds (3402kg) or more under this part unless the following requirements have been met :

(1) *Baseline Structure*.—The AOC holder's maintenance program for the airplane includes State of Design-approved damage-tolerance-based inspections and procedures for airplane structure susceptible to fatigue cracking that could contribute to a catastrophic failure. For the purpose of this section, this structure is termed "fatigue critical structure."

(2) *Adverse effects of repairs, alterations, and modifications*.—The maintenance program for the airplane includes a means for addressing the adverse effects repairs, alterations, and modifications may have on fatigue critical structure and on inspections required by paragraph (a)(1) of this section. The means for addressing these adverse effects must be approved by the Authority.

Electrical Wiring Interconnection Systems (Ewis) Maintenance Program.

IS 9.4.1.17.(E)—(*a*) After March 10, 2011, no AOC holder may operate an airplane having maximum type certificated passenger seating capacity of 30 or more; or a maximum payload capacity of 7,500 pounds or more unless the maintenance program for that airplane includes inspections and procedures for electrical wiring interconnection systems (EWIS).

(*b*) The proposed EWIS maintenance program changes must be based on EWIS Instructions for Continued Airworthiness (ICA) that have been approved by the State of Design.

(*c*) After March 10, 2011, before returning an airplane to service after any alterations for which EWIS ICA are developed, the AOC holder must include in the airplane's maintenance program inspections and procedures for EWIS based on those ICA.

(*d*) The EWIS maintenance program changes identified in paragraphs (*a*) and (*b*) of this section and any later EWIS revisions must be submitted to the Authority for review and approval.

Fuel Tank System Maintenance Program.

IS: 9.4.1.17(F)—(*a*) Except as provided in paragraph (*g*) of this section, this section applies to transport category, turbine-powered airplanes with a type certificate issued maximum type certificated passenger seating capacity of 30 or more ; or a maximum payload capacity of 7,500 pounds or more.

(*b*) For each airplane on which an auxiliary fuel tank is installed under a field approval, before June 16, 2008, the AOC holder must submit to the Authority proposed maintenance instructions for the tank that meet the requirements of theType Certificate (TC) Holder/Supplemental Type certificate (STC) Holder.

(*c*) After December 16, 2008, no AOC holder may operate an airplane identified in paragraph (a) of this section unless the maintenance program for that airplane has been revised to include applicable inspections, procedures, and limitations for fuel tanks systems.

(*d*) The proposed fuel tank system maintenance program revisions must be based on fuel tank system Instructions for Continued Airworthiness (ICA) that have been approved by the State of Design.

(*e*) After December 16, 2008, before returning an aircraft to service after any alteration for which fuel tank ICA are developed, the AOC holder must include in the maintenance program for the airplane inspections and procedures for the fuel tank system based on those ICA.

(*f*)The fuel tank system maintenance program changes identified in paragraphs (d) and (e) of this section and any later fuel tank system revisions must be submitted to the Authority for review and approval.

Limit of Validity.

IS: 9.4.1.17(G)—(*a*) *Applicability*. This section applies to AOC holders operating any transport category, turbine-powered airplane with a maximum takeoff gross weight greater than 75,000 pounds (34019kg) and a type certificate issued after January 1, 1958, regardless of whether the maximum takeoff gross weight is a result of an original type certificate or a later design change. This section also applies to AOC holders operating any transport category, turbine-powered airplane with a type certificate issued after January 1, 1958, regardless of the maximum takeoff gross weight, for which a limit of validity of the engineering data that supports the structural maintenance program (hereafter referred to as LOV) is required.

(*b*) Limit of validity. No AOC holder may operate an airplane identified in paragraph (a) of this section after the applicable date identified in Table 1 unless an Airworthiness Limitations section approved by the State of Design is incorporated into its maintenance program. The ALS must—

(1) Include an LOV approved by the State of Design, as applicable, except as provided in paragraph (e) of this section; and

(2) Be clearly distinguishable within its maintenance program.

(*c*) Extended limit of validity. No AOC holder may operate an airplane beyond the LOV, or extended LOV, specified in paragraph (*b*)(1), (*c*), or (*e*) of this section, as applicable, unless the following conditions are met :

(1) An ALS must be incorporated into its maintenance program that—

(*i*) Includes an extended LOV and any widespread fatigue damage airworthiness limitation items approved by the State of Design; and

(*ii*) Is approved by the State of Design.

(2) The extended LOV and the airworthiness limitation items pertaining to widespread fatigue damage must be clearly distinguishable within its maintenance program.

(*d*) AOC holders must submit the maintenance program revisions required by paragraphs (*b*), and (*c*) of this section to Authority for review and approval.

(*e*) Exception. For any airplane for which an LOV has not been approved as of the applicable compliance date specified in Table 1, instead of including an approved LOV in the ALS, an operator must include the applicable default LOV specified in Table 1 or Table 2 of IS, as applicable, in the ALS.

TABLE 1—AIRPLANES SUBJECT TO LOV

Airplane model	*Compliance date-months after January 14, 2014*	*Default LOV [flight cycles (FC) or flight hours (FH)]*
Airbus—Existing1		
Models Only:		
A300 B2-1A, B2-1C,		
B2K-3C, B2-203	30	48,000 FC
A300 B4-2C, B4-103	30	40,000 FC
A300 B4-203	30	34,000 FC
A300-600 Series	60	30,000 FC/67,500 FH
A310-200 Series	60	40,000 FC/60,000 FH
A310-300 Series	60	35,000 FC/60,000 FH

727 (all series)	30	60,000 FC
737 (Classics): 737-100, -200,-200C,-300,-400, -500	30	75,000 FC
Airplane model	*Compliance date—months after January 14, 2014*	*Default LOV[flight cycles (FC)or flight hours (FH)]*
737 (NG) : 737-600, -700,-700C, -800,-900, -900ER	60	75,000 FC
747 (Classics) : 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, 747SP, 747SR	30	20,000 FC
747-400: 747-400, -400D, -400F	60	20,000 FC
757	60	50,000 FC
767	60	50,000 FC
777-200, -300	60	40,000 FC
777-200LR, 777-300ER	72	40,000 FC
777F	72	11,000 FC
Airplane model	*Compliance date—months after January 14, 2014*	*Default LOV[flight cycles (FC)or flight hours (FH)]*
Bombardier—Existing1 Models Only :		
CL-600: 2D15 (Regional Jet Series 705), 2D24 (Regional Jet Series 900)	72	60,000 FC
Embraer—Existing1 Models Only:		
ERJ 170	72	*See* NOTE.
ERJ 190	72	*See* NOTE.

Fokker—Existing1 Models Only :		
F.28 Mark 0070, Mark 0100	30	90,000 FC
Lockheed—Existing1 Models Only :		
L-1011	30	36,000 FC
Airplane model	*Compliance date—months after January 14, 2014*	*Default LOV[flight cycles (FC)or flight hours (FH)]*
188	30	26,600 FC
382 (all series)	30	20,000 FC/50,000 FH
McDonnell Douglas—Existing1 Models Only :		
DC-8, -8F	30	50,000 FC/50,000 FH
DC-9 (except for MD-80 models)	30	100,000 FC/100,000 FH
MD-80 (DC-9-81, -82, -83, -87, MD-88)	30	50,000 FC/50,000 FH
MD-90	60	60,000 FC/90,000 FH
DC-10-10, -15	30	42,000 FC/60,000 FH
Airplane model	*Compliance date—months after January 14, 2014*	*Default LOV[flight cycles (FC)or flight hours (FH)].*
DC-10-30, -40, -10F, -30F, -40F	30	30,000 FC/60,000 FH
MD-10-10F	60	42,000 FC/60,000 FH
MD-10-30F	60	30,000 FC/60,000 FH
MD-11, MD-11F	60	20,000 FC/60,000 FH
Maximum Takeoff Gross Weight Changes :		
All airplanes whose maximum takeoff gross weight has been decreased	30, or within 12 months after the LOV is approved, or before	Not applicable.

to 75,000 pounds (34019kg) or below after January 14, 2014, or increased to greater than 75,000 pounds (34019kg) at any time by an amended type certificate or supplemental type certificate.	operating the airplane, whichever occurs latest.	
All Other Airplane Models (TCs and amended TCs) not Listed in Table 2	72, or within 12 months after the LOV is approved, or before operating the airplane, whichever occurs latest	Not applicable.

1Type certificated as of January 14, 2014.

Note : Airplane operation limitation is stated in the Airworthiness Limitation section.

Note: Airplane operation limitation is stated in the Airworthiness Limitation section.

Table 2—Airplanes Excluded without LOV.

Airplane model	*Default LOV[flight cycles (FC)orflight hours (FH)]*
Airbus :	
Caravelle	15,000 FC/24,000 FH
Avions Marcel Dassault:	
Breguet Aviation Mercure 100C	20,000 FC/16,000 FH
Boeing :	
Boeing 707 (-100 Series and -200 Series)	20,000 FC
Boeing 707 (-300 Series and -400 Series)	20,000 FC
Boeing 720	30,000 FC
Bombardier :	
CL-44D4 and CL-44J	20,000 FC
BD-700	15,000 FH
Bristol Aeroplane Company :	
Britannia 305	10,000 FC
British Aerospace Airbus, Ltd.:	
BAC 1-11 (all models)	85,000 FC

British Aerospace (Commercial Aircraft) Ltd.:	
Armstrong Whitworth Argosy A.W. 650 Series 101	20,000 FC
BAE Systems (Operations) Ltd.:	
BAe 146-100A (all models)	50,000 FC
BAe 146-200-07	50,000 FC
BAe 146-200-07 Dev	50,000 FC
BAe 146-200-11	50,000 FC
BAe 146-200-07A	47,000 FC
BAe 146-200-11 Dev	43,000 FC
BAe 146-300 (all models)	40,000 FC
Avro 146-RJ70A (all models)	40,000 FC
Avro 146-RJ85A and 146-RJ100A (all models)	50,000 FC
D & R Nevada, LLC:	
Convair Model 22	1,000 FC/1,000 FH
Convair Model 23M	1,000 FC/1,000 FH
deHavilland Aircraft Company, Ltd.:	
D.H. 106 Comet 4C	8,000 FH
Gulfstream :	
GV	40,000 FH
GV-SP	40,000 FH
Ilyushin Aviation Complex:	
IL-96T	10,000 FC/30,000 FH
Lockheed : 300-50A01 (USAF C 141A) 20,000 FC	

Flammability Reduction Means.

IS 9.4.1.17.(H)—(*a*) Applicability. Except as provided in paragraph (o) of this section, this section applies to transport category, turbine-powered airplanes with a type certificate issued after January 1, 1958, that, as a result of original type certification or later increase in capacity have :

(1) A maximum type-certificated passenger capacity of 30 or more, or

(2) A maximum payload capacity of 7,500 pounds (3402kg) or more.

(*b*) *New Production Airplanes.*—Except in accordance with §subpart 8.2.1.5, no AOC holder may operate an airplane identified in Table 1 (including all-cargo airplanes) for which the State of Manufacture issued the original certificate of airworthiness or export airworthiness approval after December 27, 2010 unless an Ignition Mitigation Means (IMM) or Flammability Reduction Means (FRM) meeting the requirements of fuel tank flammability is operational.

(*c*) *Auxiliary Fuel Tanks*.—After the applicable date stated in paragraph (e) of this section, no AOC holder may operate any airplane subject to air that has an Auxiliary Fuel Tank installed pursuant to a field approval, unless the following requirements are met :

(1) The AOC holder complies with fuel tank flammability.

(2) The AOC holder installs Flammability Impact Mitigation Means (FIMM), if applicable, that is approved by the State of Design.

(3) Except in accordance with §subpart 8.2.1.5, the FIMM, if applicable, is operational.

(*d*) *Retrofit*.—Except as provided in paragraphs (*j*), (*k*), and (*l*) of this section, after the dates specified in paragraph (e) of this section, no AOC holder may operate an airplane to which this section applies unless the requirements of paragraphs (*d*)(1) and (*d*)(2) of this section are met.

(1) IMM, FRM or FIMM, if required by State of Design, that are approved by the Authority, are installed within the compliance times specified in paragraph (*e*) of this section.

(2) Except in accordance with §subpart 8.2.1.5, the IMM, FRM or FIMM, as applicable, are operational.

(*e*) *Compliance Times*.—Except as provided in paragraphs (k) and (l) of this section, the installations required by paragraph (*d*) of this section must be accomplished no later than the applicable dates specified in paragraph (*e*)(1), (*e*)(2), or (*e*)(3) of this section.

(1) Fifty percent of each certificate holder's fleet identified in paragraph (*d*)(1) of this section must be modified no later than December 26, 2014.

(2) One hundred percent of each certificate holder's fleet identified in paragraph (*d*)(1) of this section must be modified no later than December 26, 2017.

(3) For those certificate holders that have only one airplane of a model identified in Table 1 of this section, the airplane must be modified no later than December 26, 2017.

(*f*) *Compliance After Installation*.—Except in accordance with §subpart 8.2.1.5, no certificate holder may—

(1) Operate an airplane on which IMM or FRM has been installed before the dates specified in paragraph (*e*) of this section unless the IMM or FRM is operational, or

(2) Deactivate or remove an IMM or FRM once installed unless it is replaced by a means that complies with paragraph (*d*) of this section.

(*g*) *Maintenance Program Revisions*.—No AOC holder may operate an airplane for which airworthiness limitations have been approved by the State of Design after the airplane is modified in accordance with paragraph (*d*) of this section unless the maintenance program for that airplane is revised to include those applicable airworthiness limitations.

(*h*) After the maintenance program is revised as required by paragraph (*g*) of this section, before returning an airplane to service after any alteration for which airworthiness limitations are required by fuel tank flammability, the AOC holder must revise the maintenance program for the airplane to include those airworthiness limitations.

(*i*) The maintenance program changes identified in paragraphs (*g*) and (*h*) of this section must be submitted to the Authority for review and approval prior to incorporation.

(*j*) The requirements of paragraph (*d*) of this section do not apply to airplanes operated in all-cargo service, but those airplanes are subject to paragraph (*f*) of this section.

(*k*) The compliance dates specified in paragraph (*e*) of this section may be extended by one year, provided that—

(1) No later than March 26, 2009, the AOC holder notifies the Authority that it intends to comply with this paragraph ;

(2) No later than June 24, 2009, the AOC holder applies for an amendment to its operations specification in accordance with part 9 of this regulations and revises the operations manual required by Part 9 to include a requirement for the airplane models specified in Table 2 of this section to use ground air-conditioning systems for actual gate times of more than 30 minutes, when available at the gate and operational, whenever the ambient temperature exceeds 60 degrees Fahrenheit ; and

(3) Thereafter, the AOC holder uses ground air conditioning systems as described in paragraph (*k*)(2) of this section on each airplane subject to the extension.

(l) For any AOC holder for which the operating certificate is issued after December 26, 2008, the compliance date specified in paragraph (*e*) of this section may be extended by one year, provided that the AOC holder meets the requirements of paragraph (*k*)(2) of this section when its initial operations specifications are issued and, thereafter, uses ground air-conditioning systems as described in paragraph (*k*)(2) of this section on each airplane subject to the extension.

(*m*) After the date by which any person is required by this section to modify 100 percent of the affected fleet, no AOC holder may operate in passenger service any airplane model specified in Table 2 unless the airplane has been modified to comply with fuel tank flammability requirements.

(*n*) No AOC holder may operate any airplane on which an auxiliary fuel tank is installed after December 26, 2017 unless the Authoritty has certified the tank as compliant with fuel tank flammability requirements.

(*o*) *Exclusions*.—The requirements of this section do not apply to the following airplane models :

(1) Convair CV-240, 340, 440, including turbine powered conversions.

(2) Lockheed L-188 Electra.

(3) Vickers VC-10.

(4) Douglas DC-3, including turbine powered conversions.

(5) Bombardier CL-44.

(6) Mitsubishi YS-11.

(7) BAC 1-11.

(8) Concorde.

(9) deHavilland D.H. 106 Comet 4C.

(10) VFW—Vereinigte Flugtechnische VFW-614.

(11) Illyushin Aviation IL 96T.

(12) Bristol Aircraft Britannia 305.

(13) Handley Page Herald Type 300.

(14) Avions Marcel Dassault—Breguet Aviation Mercure 100C.

(15) Airbus Caravelle.

(16) Fokker F-27/Fairchild Hiller FH-227.

(17) Lockheed L-300.

TABLE 1

Model—Boeing	Model—Airbus
747 Series	A318, A319, A320, A321 Series
737 Series	A330, A340 Series
777 Series	
767 Series	

TABLE 2

Model—Boeing	Model—Airbus
747 Series	A318, A319, A320, A321 Series
737 Series	A300, A310 Series
777 Series	A330, A340 Series
767 Series	
757 Series	

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NIGERIA CIVIL AVIATION REGULATIONS

PART 10—COMMERCIAL AIR TRANSPORT BY FOREIGN AIR OPERATORS WITHIN NIGERIA

INTRODUCTION

Each contracting State is empowered under the Convention on International Civil Aviation (Convention) to set the terms for entry and flight operations into, from or within that State. Ordinarily, flights in international commercial air transport are allowed into a contracting State under the terms and authority of international agreements granting the economic permission to operate into, from or within that contracting State. Such agreements require the safe operation of such aircraft. As a result, the Civil Aviation Authority (CAA) of the contracting State in which the aircraft is registered and the Civil Aviation Authority of the contracting State that issues the Air Operator Certificate to the air operator are responsible under the Convention for the safe operation of each aircraft that is allowed to conduct commercial air transport into, from or within Nigeria.

Part 10 is used to set forth the terms and conditions under which Nigeria will carry out both its aviation safety responsibility to its own citizens and to assure the safe operation, airworthiness and aircrew qualifications of foreign air operators it allows into Nigeria territory as mandated by the Convention and that contracting State's laws and regulations. The requirements placed upon such air operators in this Part are directly related to each contracting State's responsibility to assure that its air operators engaged in international commercial air transport adhere to standards set forth in applicable ICAO *Annexes* and those special conditions existing within Nigeria that Nigeria notes to ICAO as differences from the *Annex* requirements, and special conditions within Nigeria that it reports in publications like the Airman's Information Manuals and Publications. Each air operator engaged in international commercial air transport must be made aware of those requirements that Nigeria places on the air operator as conditions to gain or maintain permission to operate into, from or within Nigeria. Part 10 also recognises the responsibilities of each contracting State whose CAA regulates such air operators by making such CAA's are aware of the terms and conditions that Nigeria will require of those air operators.

Part 10 gives deference to, and emphases the responsibilities existing between all contracting States to adhere to international standards under the Convention respecting the safety regulation of its air operators, of the aircraft on its registry, and the licensing of its crew operating those aircraft. The alternative would be for Nigeria to address aviation safety solely with the air operator, which would amount to an attempt to directly regulate the foreign air operator in violation of the Convention.

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NIGERIA CIVIL AVIATION REGULATION

PART 10—COMMERCIAL AIR TRANSPORT BY FOREIGN AIR OPERATORS WITHIN NIGERIA

ARRANGEMENT OF CONTENTS

Contents :

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NIGERIA CIVIL AVIATION REGULATION

PART 10—COMMERCIAL AIR TRANSPORT BY FOREIGN AIR OPERATORS WITHIN NIGERIA

10.1. GENERAL

Applicability.

10.1.1.1.—(*a*) This regulation prescribes requirements applicable to the operation of any civil aircraft, including aeroplane or helicopter, for—

(1) The purpose of commercial air transportation operations by any air operator whose Air Operator Certificate is issued and ;

(2) Controlled by a civil aviation authority other than Nigeria.

(*b*) Part 10 does not apply to aircraft when used by military, customs, and police services, which are not used for compensation or hire.

Definitions.

10.1.1.2.—(a) For the purpose of Part 10, the following definitions shall apply :

(1) *Aeroplane flight manual*—A manual, associated with the certificate of airworthiness, containing limitations within which the aeroplane is to be considered airworthy, and instructions and information necessary to the flight crew members of the safe operation of the aeroplane.

(2) *Air operator certificate*—A certificate authorising an operator to carry out specified commercial air transport operations.

(3) *Aircraft operating manual*—A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

(4) *Foreign air operator*—Any operator, not being an air operator holding an Air Operator Certificate issued by Nigeria under the provisions of ICAO Annex 6, Part I or Part III, which undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in commercial air transport operations within borders or airspace of Nigeria, whether on a scheduled or charter basis.

(5) *Foreign Authority*—The civil aviation authority that issues and oversees the Air Operator Certificate of the foreign operator.

(6) *Minimum equipment list*—A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the Master Minimum Equipment List (MMEL) established for the aircraft type.

(7) *Operator*—A person, organization or enterprise engaged in or offering to engage in an aircraft operation. NOTE : In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.

(8) *Operations manual*—A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

(9) *Remote pilot*—A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

(10) *Remotely piloted aircraft* (*RPA*)—An unmanned aircraft which is piloted from a remote pilot station.

(11) *Rotorcraft flight manual*—A manual, associated with the certificate of airworthiness, containing limitations within which the rotorcraft is to be considered airworthy, and instructions and information necessary to the flight crew members of the safe operation of the rotorcraft.

Abbreviations.

10.1.1.3.—(*a*) The following abbreviations are used in Part 10 :

(1) AFM—Aeroplane Flight Manual ;

(2) AOC—Air Operator Certificate ;

(3) AOM—Aeroplane Operating Manual ;

(4) MEL—Minimum Equipment List ;

(5) RFM—Rotorcraft Flight Manual ;

(6) RPA—Remotely Piloted Aircraft.

Compliance.

10.1.1.4.—(*a*) A foreign air operator may not operate an aircraft in commercial air transportation operations in Nigeria contrary to the requirements of—

(1) Part 10 ;

(2) Applicable paragraphs of Parts 7 and 8 ;

(3) Applicable standards contained in the *Annexes* to the Convention on International Civil Aviation for the operation to be conducted ; and

(4) Any other requirements that the Authority may specify.

Authority to Inspect.

10.1.1.5.—(*a*) A foreign air operator shall ensure that any person authorised by the Authority, will be permitted at any time, without prior notice, to board any aircraft operated for commercial air transportation to Nigeria —

(1) To inspect the documents and manuals required by this Part ;

(2) To conduct an inspection of the aircraft ;

(3) To take appropriate action when necessary to preserve safety.

(*b*) When the Authority identifies a case of non-compliance or suspected non-compliance by an original operator with laws, regulations and procedures applicable within Nigeria, or a similar serious safety issue with that operator, the Authority shall immediately notify the operator and, if the issue warrants it, the State of the Operator. Where the State of the Operator and the State of Registry are different, such notification shall also be made to the State of Registry, if the issue falls within the responsibilities of that State and warrants a notification.

(*c*) In the case of notification to States as Specified in subpart (*b*), if the issue and its resolution warrants,the Authority shall engage in consultations with the State of the Operator and the State of Registry, as applicable, concerning the safety standards maintained by the operator.

(*d*) Inspections shall be conducted in accordance with the requirements and checklist as prescribed by the Authority.

(*e*) Findings from inspections shall be resolved in accordance with the table contained in IS : 10.1.1.5 at paragraph (*a*)

10.2. Approval to Operate in the Territory of Nigeria

Requirements for Application by Foreign Air Operators for Approval to Operate Into the Territory of Nigeria.

10.2.1.1.—(*a*) A foreign air operator from the territory of another state shall not operate an aircraft in Nigeria unless it is so authorised by the Authority and holds an associated Document of Authorisations, Conditions, and Limitations issued to it by the Authority.

(*b*) When an air operator wishes to apply to operate in Nigeria it shall—

(1) Make such application to the Authority in the form and manner prescribed ;

(*c*) An application for approval to operate into the territory of Nigeria shall be accompanied by—

(1) A certified true copy of a valid (AOC) and associated operations specifications issued to the foreign air operator by the Foreign Authority ;

(2) A copy of the approval page for a Minimum Equipment List for each aircraft type intended to be operated by the air operator in Nigeria ;

(3) A copy of the current aircraft Certificate of Registration and airworthiness certificate issued for the aircraft types proposed to be operated by the air operator in Nigeria ;

(4) A copy of the insurance certificate ;

(5) A copy of the operational procedures and practices of the operator ;

(6) A copy of a document identifying the maintenance checks that are required to be carried out for aircraft of the air operator while they are operated in Nigeria ;

(7) A copy of the maintenance contract between the air operator and the Approved Maintenance Organisation, where the maintenance under subparagraph (6), is carried out by an Approved Maintenance Organisation approved by the foreign authority ;

(8) A copy of the air service agreement, with safety clause, allowing the foreign air operator to operate in Nigeria. *See* IS : 10. 2. 1.1(*b*) for an example of the referenced air service agreement safety clause ;

(9) In the cases of wet leased aircraft: a copy of the approval of the CAA of the State of the operator, with identification of the operator that exercises operational control of the aircraft ;

(10) A proposed Aircraft Operator Security Programme for the foreign air operator who does not hold an Air Operator Certificate issued by the Authority which meets the requirements of the Nigeria Civil Aviation Regulations, for the acceptance and subsequent approval of the Authority ; and

(11) Any other document the Authority considers necessary to ensure that the intended operations will be conducted safely.

(*d*) An applicant under these Regulations shall apply for the initial issue of a Document of Authorisations, Conditions, and Limitations at least ninety days before the date of commencement of intended operation.

Conditions for the Issuance of a Document of Authorisations, Conditions, and Limitations.

10.2.1.2.—(*a*) The Authority may issue a Document of Authorisations, Conditions and Limitations to a foreign air operator to conduct commercial air operations in Nigeria where the Authority is satisfied and has confidence in —

(1) The validity of the certificates and licences associated with the operator ;

(2) The operator's personnel and aircraft ;

(3) The operational capabilities of the operator ; and

(4) The level of certification and oversight applied to the activities of the foreign air operator by the Foreign Authority.

(*b*) *See* IS : 10.2.1.2 for the process to be used for evaluating the conditions stipulated under (*a*) (1) through (4).

(*c*) No foreign air operator may commence commercial air transport operations in and to Nigeria until the Document of Authorisations, Conditions, and Limitations has been issued.

Issuance of a Document of Authorisation, Conditions, and Limitations.

10.2.1.3—(*a*) The authority may issue a Document of Authorisation, Conditions and Limitations to a foreign air operator applicant—

(1) Following approval of the foreign air operator's application to operate into the territory of Nigeria ;

(2) Upon a satisfactory administrative review of the documentation provided by the foreign air operator under 10.2.1.1 (*c*) and (*d*) ; and

(3) When it has established bilateral or multilateral agreements with the State of the Operator that includes in the agreement the safety clause referenced under 10.2.1.1 (*c*) (5) ; or

(4) When it has not established bilateral or multilateral agreements with the State of the Operator, the Authority receives no significant safety findings or major deficiencies from available safety related information relevant to the foreign air operator.

Contents of a Document of Authorisatons, Conditions, and Limitations.

10.2.1.4.—(*a*) A Document of Authorisation, Conditions and Limitations is issued to foreign air operators for elements not listed in the operator's AOC and associated operations specifications but considered necessary for compatible operations within Nigeria.

(1) A Document of Authorisations, Conditions and Limitations issued under this section shall contain—

(*i*) The foreign air operator's full name ;

(*ii*) The foreign air operator's principal business address and contact details for operational management ;

(*iii*) The foreign air operator's business address and contact details in Nigeria ;

(*iv*) The date of issuance and expiry (if any) of the foreign air operator's AOC ;

(*v*) A statement that : This Document authorises [name of foreign air operator] to operate in the territory of Nigeria ;

(*vi*) A statement that : This Document is issued to [name of foreign air operator] on the basis of it holding a valid AOC. Any changes to the AOC made by the Foreign Authority that issued and oversees the AOC of [name of foreign air operator] shall be submitted by [name of foreign air operator] in writing to the Authority within 30 days of such change ;

(*vii*) A statement that : This Document ceases to have effect upon expiry, suspension, revocation, cancellation or equivalent action in respect of the foreign air operator's AOC ; and

(*viii*) Any additional authorisations, conditions or limitations considered necessary by the Authority.

(*b*) Operations Specification issued to a foreign air operator by the Foreign Authority shall be supplementary to these Regulations.

(*c*) The Document of Authorisations, Conditions, and Limitations will be issued by the Authority in the form as contained in IS 10.2.1.4

Continued Validity of a Document of Authorisations, Conditions, and Limitations.

10.2.1.5.—(*a*) A foreign air operator shall, when conducting operations in and to Nigeria, ensure that it complies at all times with the requirements of—

(1) Its Operations Specifications ;

(2) Its approved Aircraft Operator Security Programme ; and

(3) The security requirements for aircraft operators operating in Nigeria.

10.3. DOCUMENTS

Foreign Air Operators's Aircraft Technical Log.

10.3.1.1.—(*a*) A foreign air operator shall use an aircraft technical log system containing the following information for each aircraft—

(1) Information about each flight necessary to ensure continued flight safety ;

(2) The current aircraft certificate of release to service ;

(3) The current maintenance statement giving the aircraft maintenance status of what scheduled and out of phase maintenance is next due, unless the Authority agrees to the maintenance statement being kept elsewhere ;

(4) All outstanding deferred defects that affect the operation of the aircraft ; and

(5) Any necessary guidance instructions on maintenance support.

Air Operator Manuals, Documents and Flight Crew Licences to be Carried.

10.3.1.2.—(*a*) A foreign air operator shall ensure that the following manuals, documents and licences are carried on flights into Nigeria—

(1) A certified true copy of the air operator certificate and associated operations specifications all of which shall be in the English language ;

(2) A Copy of the Document of Authorisations, Conditions, and Limitations required under Part 10 ;

(3) The current parts of the Operations Manual relevant to the duties of the crew are carried on each flight ;

(4) Those parts of the Operations Manual, which are required for the conduct of a flight and are easily accessible to the crew on board the aircraft on each flight, such as the MEL; and information and instructions relating to the interception of aircraft ;

(5) The current AFM or RFM approved by the State of Registry, or AOM approved by the State of Operator is carried on the aircraft on each flight. The AFM or RFM shall be updated by implementing changes made mandatory by the State of Registry received from the State of Design ;

(6) The current certificate of registration, and airworthiness certificate in force in respect of that aircraft ;

(7) The appropriate licences of the members of the flight crew and cabin crew, if a cabin crew licence is required by the Foreign Authority ;

(8) Appropriate approval/licence of crewmembers for aircraft radio operation.

10.3.1.3.—(*a*) A foreign air operator shall ensure that, in addition to the documents and manuals prescribed 10.3.1.2, the following information and forms, relevant to the type and area of operation, are carried on each flight—

Additional Information and Forms to be Carried.

(1) Operational Flight Plan ;

(2) Aircraft Technical Log containing at least the information required in 10.3.1.1(*a*) ;

(3) Appropriate NOTAM/AIS briefing documentation ;

(4) Appropriate meteorological information ;

(5) Passenger and Cargo manifests as appropriate for the intended flight ;

(6) The mass and balance document for the aircraft certifying that the load carried is properly distributed and safely secured ;

(7) Notification of special loads including any dangerous goods ; and

(8) Current maps and charts for the area of operation.

(*b*) The Authority may authorise the information detailed in subparagraph (*a*) above, or parts thereof, to be presented in a form other than on printed paper provided the information is accessible for inspection.

10.3.1.4.—(*a*) A foreign air operator shall—

Production of Documentation, Manuals and Records.

(1) Give any person authorised by the Authority access to any documents, manuals and records which are related to flight operations and maintenance ; and

(2) Produce all such documents, manuals and records, when requested to do so by the Authority, within a reasonable period of time.

(*b*) The pilot in command shall, within a reasonable time of being requested to do so by a person authorised by the Authority, produce to that person the documentation, manuals and records required to be carried on board.

10.3.1.5.—(*a*) Following an accident, incident, in Nigeria involving an aircraft of a foreign operator, or when the Authority so directs, the foreign operator of an aircraft on which a fight recorder is carried shall preserve the original recorded data for a period of not less than 60 days unless otherwise directed by the authority.

Preservation, Production and Use of Flight Recorder Recordings.

10.4. OPERATIONS AND PERFORMANCE

10.4.1.1.—(*a*) A foreign air operator shall compute the mass of passengers and checked baggage using—

Computation of Passenger and Baggage Weights.

(1) The actual weighed mass of each person and the actual weighed mass of baggage ; or

(2) The standard mass values specified by the foreign Authority.

(*b*) The Authority may require a foreign air operator conducting operations in Nigeria to produce evidence validating any standard mass values used.

Single-Engine Aeroplanes at Night or in IMC.

10.4.1.2.—(*a*) A foreign air operator may not operate a single-engine, non-turbine aircraft—

(1) At night ; or

(2) In Instrument Meteorological Conditions except under Special Visual Flight Rules.

(*b*) A foreign air operator may operate a single-engine turbine aircraft at night and in IMC conditions provided the State of the Operator has ensured—

(1) The reliability of the turbine engine ;

(2) The foreign operator's maintenance procedures, operating practices, flight dispatch procedures and crew training programmes are adequate ;

(3) The aeroplane is appropriately equipped for flight at night and in IMC ;

(4) For aeroplanes issued a certificate of airworthiness before 1 January 2005—an engine trend monitoring system ; and

(5) For aeroplanes issued a certificate of airworthiness after 1 January 2005—an automatic trend monitoring system.

Single Pilot Operations Under IFR or at Night.

10.4.1.3.—(*a*) A foreign air operator shall not operate an aeroplane under IFR or at night by a single pilot unless approved by the State of the Operator and the aeroplane meets the following conditions —

(1) The flight manual does not require a flight crew of more than one pilot ;

(2) The aeroplane is propeller-driven ;

(3) The maximum approved passenger seating configuration is not more than nine ;

(4) The maximum certificated take-off mass does not exceed 5,700 kg ;

(5) The aeroplane is equipped with :

(*i*) A serviceable autopilot that has at least altitude hold and heading select modes ;

(*ii*) A headset with a boom microphone or equivalent ; and

(*iii*) A means of displaying charts that enables them to be readable in all ambient light conditions.

(6) The PIC has satisfied the requirements of experience, training, checking and recency of experience.

10.4.1.4.—(*a*) Within the territorial boundaries of Nigeria, foreign air operator shall comply with the flight rules and limitations contained in Part 8. Flight Rules Within Nigeria.

(*b*) Foreign air operators shall ensure that their flight crew have available and have become familiar with the flight rules in Part 8 of this regulation.

NOTE : *The flight rules are contained in Part 8.*

10.5. FLIGHT CREW MEMBER QUALIFICATIONS

10.5.1.1.—(*a*) Foreign air operators shall ensure that their flight crews have the appropriate licences and ratings for the operations to be conducted in Nigeria. General.

10.5.1.2.—(*a*) Foreign air operators shall ensure that the required PIC engaged in single pilot operations on aircraft operating in Nigeria shall be less than 60 years of age. Age Limitations.

(*b*) Foreign air operators shall ensure, for aircraft engaged in operations in Nigeria requiring more than one pilot as flight crew members, that if one pilot is between the age of 60 and up to age 65, the other pilot shall be less than age 60.

10.5.1.3.—(*a*) As of March 5, 2008, foreign air operators shall ensure that flight crew operating aircraft in Nigeria meet the language proficiency requirement at the operational level 4 as contained in ICAO *Annex* 1 for the English language and that such proficiency is endorsed on the licence. Language Proficiency.

10.6. SECURITY

10.6.1.1—(*a*) A foreign air operator shall— Aircraft Security.

(1) Ensure that all appropriate personnel are familiar, and comply, with the relevant requirements of the national security programmes of the State of the operator ;

(2) Establish, maintain and conduct approved training programmes which enable the operator's personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or unlawful seizure of aircraft and to minimise the consequences of such events should they occur ;

(3) Following an act of unlawful interference on board an aircraft the commander or, in his absence the operator, shall submit, without delay, a report of such an act to the designated local authority and the Authority in the State of the operator ;

(4) Ensure that all aircraft carry a checklist of the procedures to be followed for that type in searching for concealed weapons, explosives, or other dangerous devices ; and

(5) If installed, the flight crew compartment door on all aircraft operated for the purpose of carrying passengers shall be capable of being locked from within the compartment in order to prevent unauthorised access.

Unauthorised Carriage.

10.6.1.2.—(*a*) A foreign air operator shall take measures to ensure that no persons conceal themselves or cargo on board an aircraft.

10.7. DANGEROUS GOODS

Offering Dangerous Goods for Transport by Air.

10.7.1.1.—(*a*) No foreign air operator may accept dangerous goods for transport by air in Nigeria unless the foreign air operator—

(1) Has been authorised to do so by the foreign Authority ; and

(2) Has conducted the required personnel training.

(*b*) The foreign air operator shall properly classify, document, certify, describe, package, mark, label and put in a fit condition for transport, dangerous goods as required by the operator's dangerous goods programme as approved by the foreign Authority.

(*c*) When the foreign operator has been granted authority to accept dangerous goods, and has an approved dangerous goods programme authorised by the foreign Authority, the foreign operator shall file a copy of its dangerous goods programme with the Authority.

Carriage of Weapons of War and Munitions of War.

10.7.1.2.—(*a*) A foreign air operator conducting commercial air transportation operations to Nigeria shall :

(1) Not transport weapons of war and munitions of war by air unless an approval to do so has been granted by all States concerned.

(2) Ensure that weapons of war and munitions of war are :

(*i*) Stowed in the aircraft in a place which is inaccessible to passengers during flight ; and

(*ii*) In the case of firearms, unloaded, unless, before the commencement of the flight, an approval has been granted by all States concerned that such weapons of war and munitions of war may be carried in circumstances that differ in part or in total from those indicated in this subparagraph.

(3) Ensure that the pilot in command is notified before the flight begins of the details and location on board the aircraft of any weapons of war and munitions of war that are intended to be carried.

Carriage of Sporting Weapons and Ammunition.

10.7.1.3.—(*a*) A foreign air operator conducting commercial air transportation operations to Nigeria shall take all measures necessary to ensure that any sporting weapons intended to be carried by air are reported.

(*b*) A foreign air operator accepting the carriage of sporting weapons shall ensure that they are—

(1) Stowed in a place on the aircraft which is inaccessible to passengers during flight unless the Authority has determined that compliance is impracticable and has approved other procedures ; and

(2) In the case of firearms or other weapons that can contain ammunition, unloaded.

(*c*) A foreign air operator may allow a passenger to carry ammunition for sporting weapons in passenger's checked baggage, as approved by the Authority.

10.8. Approval to Operate Remotely Piloted Aircraft (RPA) in the Territory of Nigeria

Requirements for application by foreign persons or operators for approval to operate remotely piloted aircraft (RPA) into the territory of Nigeria.

10.8.1.1.—(*a*) A foreign operator from the territory of another State shall not operate a RPA in Nigeria unless it is so authorised by the Authority and holds the associated approvals, conditions and limitations issued to it by the Authority.

(*b*) When a foreign operator wishes to apply to operate RPA in Nigeria it shall —

(1) Make such application to the Authority in the form and manner prescribed by the Authority :

(*c*) An application for approval to operate into the territory of Nigeria shall be accompanied by a copy of the following, in English translation if the original documents are not in the English language, for each RPA proposed to be operated in Nigeria —

(1) Certified true copy of a valid RPAS operator certificate ;

(2) Certificate of aircraft registration ;

(3) Certificate of airworthiness ;

(4) Remote pilot(s) licence and medical certificate(s) ;

(5) Aircraft radio station licence, if applicable ;

(6) Insurance certificate ;

(7) Noise certificate issued in accordance with ICAO *Annex* 16 ;

(8) Aircraft operator security programme ; and

(9) Any other document the Authority considers necessary to ensure that the intended operations will be conducted safely.

(*d*) An applicant under these Regulations shall apply for the initial issue of a foreign RPA approval at least 90 days before the date of commencement of the proposed operation.

(*e*) Once authorization has been granted by the Authority, the operator—

(*i*) Shall file a flight plan prior to operation of a RPA ;

(*ii*) Shall follow the operational rules for RPA in Nig.CARs Part 8 : 8.8.1.33 ;

(*iii*) Shall notify the Authority and ATC immediately in the event of a flight cancellation, and

(*iv*) Shall, in the case of changes to the proposed flight, submit such changes to the Authority for consideration.

NIGERIA CIVIL AVIATION REGULATION

PART 10 — IMPLEMENTING STANDARDS

IS 10.1.1.5.—(*a*) The Authority shall use the procedures in the following tables to resolve findings from inspections.

Authority to Inspect.

TABLE 1. Levels of Seriousness of Findings and Related Actions

(1) *Seriousness of findings*	*Actions*		
	(2) *Information to pilot-in-command*	(3) *Information to responsible CAA* (*State of the Operator and/or State of Registry*) *and operational management of the operator*	(4) *Corrective actions required*
Minor	Yes	No	No
Significant	Yes	Yes Letter to CAA and copy to operator's management	No
Major	Yes	Yes Letter to CAA and copy to operator's management. In case of aircraft damage affecting airworthiness, a direct communication with the CAA in the State of Registry should be established. Under the provisions of ICAO Annex 8, that CAA decides about conditions regarding return to flight status. Confirmation afterwards with a letter to the CAA and a copy to the operator's management.	Yes Actions consting operational restrictions, corrective actions before flight or at maintenance base, grounding and/or withdrawal of approval to operate in the territory of STATE.

ICAO Doc 8335, Fifth Edition (2010), *Part VI, Chapter* 6, *Table* 6-1

TABLE 2. Examples of Findings and Levels of Seriousness

	Seriousness		
(1) *Item Descriptions*	(2) *Minor*	(3) *Significant*	(4) *Major*
A. FLIGHT DECK – GENERAL			
1. General condition	Dirty and untidy.		Large unsecured objects (e.g. cargo or baggage) Unserviceable flight crew seats.
2. Emergency exits	Not all exits are serviceable, but properly deferred in accordance with MEL provisions.	Not all exits are serviceable and MEL provisions not applied.	No emergency exits serviceable/no provisions in MEL for continued operation.
3. Equipment-GPWS	Inoperative and in accordance with MEL provisions.	Inoperative and MEL provisions not applied.	Not installed. Forward looking GPWS required and not installed.
4. Equipment–FMC		Flight management system (FMS) database recently outdated (less than 28 days).	FMS database more than 28 days outdated.
5. Equipment – ACAS/CVR/FDR/ELT	Inoperative and in accordance with MEL provisions.	In operative and MEL provisions not applied.	Required and not installed.
B. FLIGHT DECK DOCUMENTATION			
1. Aircraft flight manual		No evidence of State of Registry approval. Incomplete, but performance calculations possible.	Not on board and performance calculations not possible.
2. Operations manual		Incomplete (*see* Annex 6, Appendix2) or not approved by State of the Operator or not the current version.	Not on board.
3. Checklists	Not within reach.	Not readily available and used or not the current version.	Not on board.
4. Route guide (navigation charts)	Not within reach.	Recently out of date. (28 days or less). Photocopies of current charts.	Significantly out of date (more than 28 days). Not on board.

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
5. MEL		Not on board or MMEL used, but no deferred defects. MEL content does not reflect aircraft equipment fitted. MEL not approved.	Not on board or MMEL used, with deferred defects.
6. Certificate of registration	Non-certified copy.	Not on board. No English translation.	
7. Certificate of airworthiness		Not an original or certified true copy. No English translation.	Not on board. Out of date.
8. Crew member licences (see also E—General, 3, Language for communications, in this table)	Form or content not in compliance with ICAO Standards.	No English translation.	Not valid for the type of aircraft. Not on board or no proper validation from the State of Registry. Expired or no Class 1 medical assessment.
9. Journey log book or equivalent technical log	Minor defects not documented.	Onboard but not properly completed.	Not on board or no equivalent document. Maintenance release expired or not valid. MEL rectification interval deadline expired for deferred defects.
10. Radio station licence	Non-certified copy	Not on board.	
11. Noise certificate (where applicable)	Not on board. No English translation.		
12. Air operator certificate (AOC) (certified true copy)		Not a certified true copy of AOC.	
13. Operations specifications (copy)		Not accurate (out of date, incorrect operation type/ route, incorrect aircraft or operator, etc.) or no English translation.	
14. Operational flight plan	Copy not retained on ground.	Actual flight calculations but no actual documents. Lack of fuel monitoring data (arrival flight). Fuel calculation unsatisfactory. (departing flight).	No or incomplete flight preparation. Required fuel calculation not available or not updated for actual conditions.

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
15. Mass and balance sheet and data		Incorrect but within aircraft limits.	Incorrect and outside operational limits or missing. Mass and balance data not available.
16. Aircraft performance limitations using current route, airport obstacles and runway analysis data	Incomplete, but not affecting the operation on that date (e.g. no contaminated or Wet runway data, but these conditions are not present).	Not current data or data validity date not available.	Not available.
17. Cargo manifest and if applicable, passenger manifest		Some limited inaccuracy or missing data not affecting safety.	Not available or grossly inaccurate/ incomplete.
18. Preflight inspection	Form on board but incomplete.	Not performed for inbound flight.	Not performed for outbound flight.
19. Weather reports and forecasts	Not the latest available data but valid.	Not printed but handwritten.	Not valid or not available.
20. NOTAMs		Some en-route relevant data missing.	Not available.
C. FLIGHT DECK — SAFETY EQUIPMENT			
1. Portable fire extinguishers	Note easily accessible.	Expired Not properly secured.	Empty or insufficient number or missing. Significantly low pressure Not accessible.
2. Lifejackets/flotation devices, (if required)	Not directly accessible.	Expired, as applicable.	Not available for each cockpit crew member on board.
3. Harness		Seat belt instead of harness.	Not available or serviceable for all flight crew members.
4. Oxygen equipment, (if required)		No direct access.	Not available or serviceable for all flight crew members. Oxygen quantity not sufficient.
5. Electric flashlight (night operations conducted by operator)	Only one available.	Weak battery.	Not in cockpit or unserviceable.

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
D. CABIN SAFETY			
1. General condition	Dirty, untidy and in bad condition.	Loose carpet. Loose or damaged floor panel. Unserviceable seats (and not identified as such).	Not possible to perform, unrestricted, normal and abnormal duties.
2. Cabin crew seats	Harness/belt is difficult to operate.	Strap or buckle worn out or damage; item is not serviceable.	For any member of the minimum required cabin crew: a seat is not available; or proper harness and seat belt not available or not serviceable.
3. First aid kit/emergency medical kit	Expired. Incomplete. Not at the indicated location.		Not available.
4. Portable fire extinguishers	Not directly accessible.	Expired. Not properly secured.	Empty, significantly low pressure, or missing, or not serviceable.
5. Life jackets/Flotation devices (if required)	Not directly accessible.	Expired, as applicable.	Not available for each person to be carried.
6. Seat belts (passenger seats)	Strap or buckle worn out or damaged. Not available or serviceable for all passenger seats and aircraft dispatched in accordance with MEL.	Not available or serviceable for all passenger seats, and aircraft not dispatched in accordance with MEL.	Not available or not serviceable for any passenger.
7. Emergency exit lighting and marking, emergency flashlights		Some emergency exit signs out of order. Insufficient number of emergency flashlights; emergency flashlights not correctly located; emergency flashlight batteries weak or flat.	Emergency lighting equipment defects not acceptable according to MEL provisions.
8. Slides/life-rafts (as required) (for long-range over water flights)	Not in specified location, as established by the State of the Operator.	Incorrectly installed.	Insufficient number. Not serviceable.
9. Oxygen supply (cabin crew and passengers)	Insufficient quantity of oxygen or insufficient quantity of masks for passengers and crewmembers.	Insufficient quantity of oxygen or insufficient quantity of masks for passengers and crew members, and flight performed above flight level 250.	

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
10. Emergency briefing cards	Not enough emergency briefing cards for all passengers.	Briefing cards from another aircraft or from obviouslydifferent versions. Some information missing or incorrect.	No emergency briefing cards on board.
11. Cabin crew members		Cabin crew members Not in specified location.	Insufficient number of cabin crew members.
12. Access to emergency exits			Impeded by luggage or cargo, etc. Impeded by seats.
13. Safety of cabin baggage			Not securely stowed.
14. Seating capacity			More seats than certified capacity. Insufficient serviceable seats for all passengers onboard.
E.	**AIRCRAFT EXTERNAL CONDITION**		
1. General external condition	Minor defects.	The defects need not necessarily be corrected before flight (visible corrosion, marking not legible, etc.)	Safety-related defect (correction required before departure). Inadequate de-icing.
2. Doors and hatches	Minor defects but serviceable.	Door operating instructions missing or unclear. Seals lightly damaged.	Unserviceable and not compatible with number of passengers onboard. Seal missing or badly damaged.
3. Flight controls	Minor defects.	Poor condition (damage, missing bonding strips or static discharges, play, lack of lubrication, disbanding).	Damage, corrosion, leaks or wear outside limits of MEL, structural repair manual (SRM),etc.
4. Wheels, tires and brakes	Minor defects.	Signs of under inflation. Incorrect tire pressure. Unusual wear and tear.	Tires worn out or damaged beyond limits. Brakes worn out, leaking or damaged beyond limits. Damaged components or missing parts (e.g. tiebolts, heat sensors).

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
5. Under carriage	Minor defects.	Significant signs of leakage, strut under-pressure, corrosion and obvious lack of lubrication.	Damage, corrosion, missing parts and/or leakage outside limits.
6. Wheel well	Minor defects or dirty.	Signs of leakage, corrosion and obvious lack of lubrication.	Damage, widespread corrosion, leakage outside limits.
7. Intake and exhaust nozzle	Minor defects.	Damage to casing or lining. Dents and cracks in exhaust are all within limits, but not recorded in Technical Log or equivalent document. Minor leaks of oil and fuel.	Damage (nicks, dents, cracks, etc.) outside the MEL, aircraft maintenance manual (AMM), SRM, etc., limits. Leakage outside limits.
8. Fan blades (if applicable)	Minor defects.	Damage to fan blades within limits but not recorded in technical log or equivalent document.	Damage (nicks, dents, cracks, etc.) outside the MEL, AMM, SRM, etc., limits.
9. Propellers (if applicable)	Minor defects.	Damage to propellers within limits but not recorded in technical log or equivalent.	Damage (nicks, dents, cracks, etc.), leakage, looseness of blades outside the MEL, AMM, SRM, etc., limits.
10. Previous structural repairs	Minor defects.	No information about temporary repairs, doubts about old repairs, and repairs acceptable for continuation of flight.	Improperly performed repairs or apparent unsatis-factory design. Damage to old repair.
11. Obvious un-repaired damage	Within limits and recorded.	Within limits but not recorded.	Un-assessed and not recorded damage affecting air-worthiness.
12. Leakage	Within limits.	Long-standing water and lavatory leaks (blue ice).	Leakage (oil, fuel, hydraulic, water) outside limits.
F. CARGO			
1. General condition of cargo compartment and containers	Partly defective lights Minor defects, but safe condition.	Partly damaged paneling. Partly damaged containers. Defectivelights. Floor locks (partly) unserviceable. Limited access to cargo Area (for combis). Dividing net or door protection net damaged.	Damaged paneling outside limits. Damaged containers. Structural damage outside limits. Defective or missing fire extinguishing system (where applicable). Cargo

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
			are not used in accordance with classification. No access to cargo area (for combis). No barrier net (combis and cargo aircraft). No smoke barrier curtain. Floor locks unserviceable and outside MEL limits.
2. Dangerous goods	Unable to recognize dangerous goods presented to operator for shipment.	No dangerous goods regulations or references.	No, or incomplete, information to the pilot-in-command of dangerous goods carried, in contradiction with Doc 9284 provisions. Deficiencies: leakage, wrong packaging, label missing. Dangerous goods not correctly secured. Loading not performed in accordance with Annex 18. Dangerous goods carried without authorization or in contradiction to Annex 18 or Doc 9284 provisions.
3. Safety of cargo on board	Minor damage to: lashing, tiedown equipment, pallet/container and/or locks.	Damaged pallet, container or net.	Cargo not safely secured and/or properly distributed: – lashing – tie-down equipment – pallets and containers – locks Load distribution floor load limit exceeded.
G. GENERAL			
1. Additional remarks	General findings with minor safety impact.	General findings with significant safety impact.	General findings with major safety impact.

TABLE 2. Examples of Findings and Levels of Seriousness—*continued*

(1) *Item Descriptions*	*Seriousness* (2) *Minor*	(3) *Significant*	(4) *Major*
2. Refuelling	Cabin crew not aware of refueling with passengers on board.	No procedures in place for refueling with passengers onboard.	Procedures in place but not carried out.
3. Language for communications		Pilot licenses with no language proficiency endorsement, for the English language or the language used in radio telephony (except if implementation plan is made available by the State of issue — until 5 March 2011).	Pilots not fluent in the English language or in the language used in radio telephony.

ICAO Doc 8335, *Fifth Edition* (2010), *Part VI, Chapter* 6, *Table* 6-2

Requirements for the Application by Foreign Air Operators for Approval to Operate into the Territory of State

IS: 10.2.1.1.—(*a*) Foreign Operator's Application Form (Page 1 of 2)

Application Form for Commercial Air Transport Operations by a Foreign Operator
(*To be completed by a foreign air operator for an approval to conduct operations in Nigeria*)

SECTION 1A. TO BE COMPLETED BY ALL APPLICANTS

1. Company registered name and trading name if different. Address of company : mailing address ; telephone ; fax ; and e-mail.
2. Address of the principal place of business including: telephone ; fax ; and e-mail.
3. Proposed start date of operations: (dd/mm/yyyy) :
4. ICAO 3-letter designator for aircraft operating agency :
5. Operational management personnel

Name	Title	Telephone, fax and e-mail

SECTION 1B. TYPE OF APPROVAL REQUESTED - *To be completed by all applicants, checking applicable boxes*

6. 1. ☐ Air operator intends to conduct commercial flights to and from aerodromes in Nigeria
   2. ☐ Air operator intends to only conduct over flights and technical stops in Nigeria.

7. Air operator proposed types of operation:
   - ☐ Passengers and cargo
   - ☐ Cargo only
   - ☐ Scheduled operations
   - ☐ Charter flight operations
   - ☐ Dangerous goods

8. Geographic areas of intended operations and proposed route structure :

SECTION 1C ON PAGE 2 - *To be completed by the air operator*

Signature :

Date (dd/mm/yy) :

Name and title :

Evaluated by (name and office) :

CAA decision :
☐ Approval granted ☐ Not approved

Remarks :

Signature of CAA representative :

Date (dd/mm/yy) :

Foreign Operator's Application Form—*continued*

SECTION 1C. *To be completed by air operator*				
9. Provide location on board or provide separate documentation where individual aircraft nationality and registration marks are listed as part of the aircraft fleet operated under the air operator certificate : Provide following information :				
Aircraft type (*make, model and series, or master series*)	RVSM[1] Approval	ETOPS3	Noise[2] certification (Annex 16 Ch.)	Remarks
[Aircraft type 1]	☐	☐		
[Aircraft type 2]	☐	☐		
[Aircraft type 3]	☐	☐		
[Aircraft type 4]	☐	☐		
Etc.	☐	☐		

Attach copies of :

- Proof of Economic Authority ;
- Air operator certificate and associated operations specifications ;
- Insurance certificate ;
- In case of wet-lease of aircraft: approval of CAA of the State of the Operator, with identification of the operator that exercises operational control on the aircraft ; and
- Document authorising the specific traffic rights, issued by [Department of Commerce] or resulting from a bilateral air transport agreement (if required by the State to which the operator is flying to).

ICAO Doc. 8335, *Part,* 5*th Edition, Attachment VI-C*

Safety Clause Example.

IS: 10.2.1.1. (*b*)—Example of Safety Clause that must be inserted into Air Service Agreements that allows operators to provide service to Nigeria and vice versa.

(*a*) Each Party may request consultations at any time concerning the safety standards maintained by the other Party in areas relating to aeronautical facilities, flight crew, aircraft and the operation of aircraft. Such consultations shall take place within thirty days of that request.

(*b*) If, following such consultations, one Party finds that the other Party does not effectively maintain and administer safety standards in the areas referred to in paragraph 1 that meet the Standards established at that time pursuant to the Convention on International Civil Aviation (Doc 7300), hereinafter referred to as: the Convention, the other Party shall be informed of such findings and of the steps considered necessary to conform with the ICAO Standards. The other Party shall then take appropriate corrective action within an agreed time period.

(*c*) Pursuant to Article 16 of the Convention, it is further agreed that any aircraft operated by, or on behalf of an airline of one Party, on service to or from the territory of another Party, may, while within the territory of the other Party be the subject of a search by the authorised representatives of the other Party, provided this does not cause unreasonable delay in the operation of the aircraft. Notwithstanding the obligations mentioned in Article 33 of the Convention, the purpose of this search is to verify the validity of the relevant aircraft documentation, the licensing of its crew, and that the aircraft equipment and the condition of the aircraft conform to the Standards established at that time pursuant to the Convention.

(*d*) When urgent action is essential to ensure the safety of an airline operation, each Party reserves the right to immediately suspend or vary the operating authorisation of an airline or airlines of the other Party.

(*e*) Any action by one Party in accordance with paragraph (*d*) above shall be discontinued once the basis for the taking of that action ceases to exist.

(*f*) With reference to paragraph (*b*) above, if it is determined that one Party remains in non-compliance with ICAO Standards when the agreed time period has lapsed, the Secretary General of ICAO should be advised thereof. The latter should also be advised of the subsequent satisfactory resolution of the situation.

IS: 10.2.1.2.—(*a*) The [Authority of] shall, when evaluating an application by a foreign air operator to operate within the territory of Nigeria—

Conditions for the Issuance of a Document of Authorisations, Conditions and Limitations.

(1) Examine both the safety oversight capabilities and record of the Foreign Authority of the State of the Operator, and if different, the State of Registry ; and

(2) The operational procedures and practices of the foreign air operator itself.

NOTE : This is necessary in order to have confidence in the validity of the certificates and licences associated with the foreign air operator, its personnel and aircraft, the operational capabilities of the foreign air operator and in the level of certification and oversight applied to the activities of the foreign air operator by the Foreign Authority of the State of the Operator.

(*b*) The Authority shall obtain information on the safety oversight capabilities, and the level of compliance with ICAO Standards, of the Foreign Authority of the State of the Operator by accessing information from the ICAO Universal Safety Oversight Audit Programme (USOAP). This information is available—

(1) On the ICAO website http://www.icao.int and accessible through the Flight Safety Information Exchange (FSIX) - Safety Oversight Information - Audit Reports (1999-2004) or Audit Reports (Comprehensive Systems Approach) ;

(2) On the ICAO Safety Oversight Audit (SOA) Secure Site which is accessible, subject to a password available only to the Authority from ICAO, through the FSIX home page ; and

(3) Subject to a password available only to the Authority from ICAO, by accessing audit summary reports from the USOAP audits available to the [Authority of] on the ICAO-Net http://www.icao.int/icaonet/ ;

(*c*) The Authority shall obtain and evaluate information on the foreign air operator. This information is available —

(1) By applying to the Foreign Authority of the State of the Operator for reports of any inspections that may have been conducted ; and

(2) By requesting access to reports of audits of a foreign air operator, conducted by independent aviation audit organisations and / or by other air operators, such as code-sharing partners. Such non-regulatory audits should be used in conjunction with other information such as a report from the ICAO Universal Safety Oversight Audit Programme (USOAP) or other inspection results to evaluate the application.

(*d*) Foreign Air Operator's Application—

(1) In the case of significant negative findings and/or major deficiencies relevant to its review of the safety oversight capabilities and the level of compliance with ICAO Standards of the Foreign Authority of the State of the Operator, the Authority will engage in discussions with the Foreign Authority of the State of the Operator seeking resolution of the deficiencies prior to deciding whether to approve or not to approve the Foreign Air Operator Application and whether to approve or not to approve a Document of Authorisations, Conditions and Limitations.

(2) In the case of significant negative findings and/or major deficiencies relevant to its evaluation of the foreign air operator, the Authority shall not approve the foreign air operator's Foreign Air Operator Application and shall not issue a Document of Authorisations, Conditions and Limitations to the foreign air operator.

IS: 10.2.1.4. FORMAT OF THE DOCUMENT OF AUTHORISATIONS, CONDITIONS AND LIMITATIONS

<table>
<tr><td colspan="2">FOREIGN AIR OPERATOR DOCUMENT OF AUTHORISATIONS, CONDITIONS AND LIMITATIONS</td></tr>
<tr><td rowspan="2"></td><td>FEDERAL REPUBLIC OF NIGERIA</td></tr>
<tr><td>NIGERIAN CIVIL AVIATION AUTHORITY</td></tr>
<tr><td colspan="2">OPERATOR FULL NAME AND PRINCIPAL BUSINESS ADDRESS:
OPERATOR NAME : ____________
Dba trading name : ____________
Operator address : ____________
Telephone : ____________
Fax : ____________
E-mail : ____________</td></tr>
<tr><td>Accountable Manager
Name :
Telephone :
E-mail :</td><td>Director of Flight Operations
Name :
Telephone :
E-mail :</td></tr>
<tr><td>Quality Manager
Name :
Telephone :
E-mail :</td><td>Director of Safety
Name :
Telephone :
E-mail :</td></tr>
<tr><td colspan="2">OPERATOR BUSINESS ADDRESS AND CONTACT DETAILS IN NIGERIA
Operator Business Address :
Country Manager’s Name :
Telephone :
E-mail :</td></tr>
<tr><td colspan="2">The date of issuance and expiry (if any) of the foreign air operator's AOC
Date of Issuance : ____________ Expiry Date : ____________</td></tr>
<tr><td colspan="2">This Document authorises [name of foreign air operator] to operate in the territory of Nigeria.
This Document is issued to [name of foreign air operator] on the basis of it holding a valid AOC. Any changes to the AOC made by the Foreign Authority that issued and oversees the AOC of [name of foreign air operator] shall be submitted by [name of foreign air operator] in writing to the Authority within 30 days of such change.
This Document ceases to have effect upon expiry, suspension, revocation, cancellation or equivalent action in respect of the foreign air operator's AOC.
Additional authorisations, conditions or limitations considered necessary by the Authority (as applicable).
Date of issue: ________ Title: ________ Name: ____________
Signature: ____________</td></tr>
</table>

Extraordinary

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NIGERIA CIVIL AVIATION REGULATIONS

PART 11—AERIAL WORK

INTRODUCTION

Part 11 of the Regulations sets forth the requirements for aerial work operations, including agricultural aviation, helicopter external load carrying, glider and banner towing, TV and movie operations, sight-seeing flights, fish spotting and traffic reporting. Although the requirements of Part 11 appear to address operations internal to Nigeria, in some instances, aircraft registered in Nigeria will be able to perform aerial work in contiguous States.

The *Annexes* to the Convention on International Civil Aviation do not specifically address aerial work. *Annexes* 1 and 6 to the Convention on International Civil Aviation contain a definition of aerial work but the historical background section of the *Annex* 6, Part II, Foreword, notes that this definition is included so that States will know that the Annex 6 does not address aerial work. Aerial work operations can be carried out outside the boundaries of Nigeria and it is only practicable that the aircraft must be operated and maintained in accordance with the International Civil Aviation Organisation standards set forth in other parts of these Regulations.

B 1978

NIGERIA CIVIL AVIATION REGULATIONS

PART 11—AERIAL WORK

ARRANGEMENT OF CONTENTS

Contents :

B 1982

S. I. No. 36 of 2015

NIGERIA CIVIL AVIATION REGULATIONS

PART 11—AERIAL WORK

11.1. General

11.1.1.1.—(*a*) This part contains the requirements for those operators and operations that are considered to be aerial work in Nigeria. Applicability.

(*b*) All persons who conduct aerial work in Nigeria must comply with certification requirements of this part.

(*c*) All persons who conduct aerial work in Nigeria must comply with the applicable airworthiness and operational requirements of this Part, except where this part grants relief from those requirements or specifies additional requirements.

(*d*) All persons who conduct aerial work in Nigeria in a remotely piloted aircraft must comply with the requirements for remotely piloted aircraft in Nig. CARs Part 8.1.3.3 and the applicable requirements of this Part except where this part may be less prescriptive than Nig. CARs Part 8.1.3.3.

11.1.1.2.—(*a*) Definitions are contained in Nig. CARs Part 1: Definitions.

11.1.1.3. Definitions from the MCARs to inserted by Charles. Abbreviations.

(*a*) The following abbreviations are used in Part 11 :

(1) AGL—Above Ground Level.

(2) PIC—Pilot in Command.

(3) IFR—Instrument Flight Rules.

11.1.1.4.—(*a*) No person may engage in aerial work operation unless he/she is a holder of a Permit for Aerial Aviation Services (PAAS) issued by the Authority under Part 18 of these Regulations. General Rule.

11.2. Agricultural Aircraft Operations

11.2.1. General

11.2.1.1.—(*a*) Part 11 prescribes rules governing— Applicability.

(1) Agricultural aircraft operations within Nigeria, and

(2) The issue of commercial and private agricultural aircraft operator certificates for those operations.

(*b*) In a public emergency, a person conducting agricultural aircraft operations under Part 11 may, to the extent necessary, deviate from the operating rules of Part 11 for relief and welfare activities approved by an agency of the Nigeria or a local government.

(*c*) Each person who, under the authority of this section, deviates from a rule of Part 11 shall, within 10 days after the deviation send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.

11.2.2. Certification Rules

Certificate Required.

11.2.2.1.—(*a*) Except as provided in paragraphs (*c*) and (*d*) of this section, no person may conduct agricultural aircraft operations without, or in violation of, an agricultural aircraft operator certificate issued under Part 11.

(*b*) An operator may, if it complies with this subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without a rotorcraft external-load operator certificate.

(*c*) A local or national government conducting agricultural aircraft operations with public aircraft need not comply with this subpart.

(*d*) The holder of a rotorcraft external-load operator certificated under this Part 11 may conduct agricultural aircraft operations, involving only the dispensing of water for forest fires by rotorcraft external load means, needs to comply with this subpart.

Application for Certificate.

11.2.2.2.—(*a*) An applicant for an agricultural aircraft operator certificate shall apply on a form and in a manner prescribed by the authority.

Amendment of Certificate.

11.2.2.3.—(*a*) An agricultural aircraft operator certificate may be amended—

(1) On the Authority's own initiative, under applicable laws and regulations, or

(2) Upon application by the holder of that certificate.

(*b*) A certificate holder shall submit any application to amend an agricultural aircraft operator certificate on a form and in a manner prescribed by the Authority. The applicant shall file the application at least 15 days before the date that it proposes the amendment become effective, unless the Authority approves a shorter filing period.

(*c*) The Authority will grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.

(*d*) Within 30 days after receiving a refusal to amend, the holder may petition the Authority to reconsider the refusal.

Certificate Requirements.

11.2.2.4.—(*a*) *General*. Except as provided by paragraph (*a*)(*3*) of this section—

(1) The Authority will issue a private agricultural aircraft operator certificate to an applicant who meets the requirements of this subpart for that certificate.

(2) The Authority will issue a commercial agricultural aircraft operator certificate to an applicant who meets the requirements of this subpart for that certificate.

(3) An applicant who applies for an agricultural aircraft operator certificate containing a prohibition against the dispensing of economic poisons is not required to demonstrate knowledge specific to economic poisons.

(*b*) *Pilots*.

(1) A private operator-pilot applicant shall hold a current Nigeria private, commercial, or airline transport pilot licence and be properly rated on the aircraft to be used.

(2) A commercial operator-pilot applicant shall hold, or have available the services of at least one pilot who holds a current commercial or airline transport pilot licence issued by the Authority and who is properly rated on the aircraft to be used.

(*c*) *Aircraft*. The applicant shall have at least one certified and airworthy aircraft, equipped for agricultural operation.

(*d*) *Knowledge and skill tests*. The applicant shall show that it has satisfactory knowledge and skill of the following agricultural aircraft operations.

(1) *Knowledge* :

(*i*) Steps to be taken before starting operations, including a survey of the area to be worked.

(*ii*) Safe handling of economic poisons and the proper disposal of used containers for those poisons.

(*iii*) The general effects of economic poisons and agricultural chemicals on plants, animals, and persons, and the precautions to be observed in using poisons and chemicals.

(*iv*) Primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken, and the location of poison control centres.

(*v*) Performance capabilities and operating limitations of the aircraft to be used.

(*vi*) Safe flight and application procedures.

(2) Skill in the following manoeuvres, demonstrated at the aircraft's maximum certified take-off weight, or the maximum weight established for the special purpose load, whichever is greater :

(*i*) Short-field and soft-field takeoffs (aeroplanes and gyroplanes only).

(*ii*) Approaches to the working area.

(*iii*) Flare-outs.

(*iv*) Swath runs.

(*v*) Pullups and turnarounds.

(*vi*) Rapid deceleration (quick stops) in helicopters only.

Duration of Certificate.

11.2.2.5.—(*a*) An agricultural aircraft operator certificate is effective and valid for twenty four (24) months unless it is surrendered, suspended, or revoked.

11.2.3. OPERATING RULES

General.

11.2.3.1.—(*a*) Except as provided in paragraph (*c*) of this section, this section prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under Part 11.

(*b*) The holder of an agricultural aircraft operator certificate may deviate from the provisions of Part 9 without a certificate of waiver when conducting aerial work operations related to agriculture, horticulture, or forest preservation in accordance with the operating rules of this section.

(*c*) The operating rules of this subpart apply to Rotorcraft External load certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft external-load means.

Carrying of Certificate.

11.2.3.2.—(*a*) No person may operate an aircraft unless a certified true copy of the agricultural aircraft operator certificate is carried on that aircraft.

(*b*) The registration and airworthiness certificates issued for the aircraft need not be carried in the aircraft provided that those certificates not carried in the aircraft shall be kept available for inspection at the base from which the dispensing operation is conducted.

Limitations on Private Agricultural Aircraft Operator.

11.2.3.3.—(*a*) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—

(1) For compensation or hire,

(2) Over a congested area, or

(3) Over any property unless he or she is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.

Manner of Dispensing.

11.2.3.4.—(*a*) No persons may dispense, or cause to be dispensed, any material or substance in a manner that creates a hazard to persons or property on the surface.

Economic Poison Dispensing.

11.2.3.5.—(*a*) Except as provided in paragraph (*b*) of this Section, No person may dispense or cause to be dispensed, any economic poison That Is Registered With Nigeria—

(1) For a use other than that for which it is registered,

(2) Contrary to any safety instructions or use limitations on its label, or

(3) In violation of any law or regulation of Nigeria.

(*b*) This section does not apply to any person dispensing economic poisons for experimental purposes under—

(1) The supervision of a Nigeria agency authorised by law to conduct research in the field of economic poisons, or

(2) A permit from Nigeria.

Personnel.

11.2.3.6.—(*a*) *Information*. The holder of an agricultural aircraft operator certificate shall ensure that each person used in the holder's agricultural aircraft operation is informed of that person's duties and responsibilities.

(*b*) *Supervisors*. No person may supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this subpart.

(*c*) *Pilot in command*. No person may act as pilot in command of an aircraft operated under this subpart unless that pilot—

(1) Holds a pilot licence and rating prescribed by this subpart as appropriate to the type of operation conducted, or

(2) Has demonstrated to the holder of the agricultural aircraft operator certificate conducting the operation, or to a supervisor designated by that certificate holder, that he or she possesses the knowledge and skill requirements of this subpart.

Operations in Controlled Airspace Designated for an Airport.

11.2.3.7.—(*a*) Except for flights to and from a dispensing area, no person may operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an airport unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.

(*b*) No person may operate an aircraft in weather conditions below VFR minima within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.

(*c*) A certificate holder may operate an aircraft under special VFR weather minima without meeting the requirements prescribed in Part 8.

Operation over Congested Areas : General.

11.2.3.8.—(*a*) A certificate holder may operate or cause the operation of an aircraft over a congested area at altitudes required if the operation is conducted with—

(1) The maximum safety to persons and property on the surface, consistent with the operation, and

(2) A plan for each operation, submitted and have approval of the Authority, which includes—

(*i*) Obstructions to flight,

(*ii*) Emergency landing capabilities of the aircraft to be used, and

(*iii*) Any necessary co-ordination with air traffic control.

(*b*) Each certificate holder shall ensure that all single engine aircraft while in a congested area operate :

(1) Except for helicopters, not loaded during take offs and turnarounds.

(2) Not below the altitudes prescribed in Part 8 except during the actual dispensing operation, including the approaches and departures necessary for that operation.

(3) During the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in Part 8 unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.

(*c*) Each certificate holder shall ensure that all multiengine aircraft while in a congested area operate :

(1) During takeoff, under conditions that will allow the aeroplane to be brought to a safe stop within the effective length of the runway from any point on takeoff up to the time of attaining, with all engines operating at normal takeoff power, 105 percent of the minimum control speed with the critical engine inoperative in the takeoff configuration or 115 percent of the power-off stall speed in the takeoff configuration, whichever is greater.

Note : Assume still-air conditions, and no correction for any uphill gradient of 1 percent or less when the percentage is measured as the difference between elevation at the end points of the runway divided by the total length. For uphill gradients greater than 1 percent, the effective takeoff length of the runway is reduced 20 percent for each 1-percent grade.

(2) At a weight greater than the weight that, with the critical engine inoperative, would permit a rate of climb of at least 50 feet per minute at an altitude of at least 1,000 feet above the elevation of the highest ground or obstruction within the area to be worked or at an altitude of 5,000 feet, whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favourable positions; and that the remaining engine or engines are operating at the maximum continuous power available.

(3) Below the altitudes prescribed in Part 8 except during the actual dispensing operation, including the approaches, departures, and turnarounds necessary for that operation.

(*d*) Each certificate holder shall issue notice of the intended operation to the public as may be specified by the Authority.

11.2.3.9.—(*a*) *Pilots*. Each pilot in command must have at least— Operation Over Congested Areas : Pilots and Aircraft.

(1) 25 hours of pilot-in-command flight time in the make and basic model of the aircraft, including at least 10 hours within the preceding 12 calendar months, and

(2) 100 hours of flight experience as pilot in command in dispensing agricultural materials or chemicals.

(*b*) *Aircraft*.

(1) Except for helicopters, each aircraft shall be capable of jettisoning at least one-half of the aircraft's maximum authorised load of agricultural material within 45 seconds. If the aircraft is equipped to release the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crewmember.

11.2.3.10.—(*a*) Each holder of an agricultural aircraft operator certificate shall keep that certificate at its home base and shall present it for inspection on the request of the Authority or any government law enforcement officer. Availability of Certificate.

11.2.4. RECORDS AND REPORTS

11.2.4.1.—(*a*) Each holder of a commercial agricultural aircraft operator certificate shall maintain and keep current, at the home base designated in its application, the following records— Records : Commercial Agricultural Aircraft Operator.

(1) The name and address of each person for whom agricultural aircraft services were provided,

(2) The date of the service,

(3) The name and quantity of the material dispensed for each operation conducted, and

(4) The name, address, and licence number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this subpart.

(*b*) The records required by this section must be kept for at least 12 months.

11.2.4.2.—(*a*) Each holder of an agricultural aircraft operator certificate shall notify the Authority in writing in advance of any change in the address of its home base of operations. Change of Address.

11.2.4.3.—(*a*) Whenever a certificate holder ceases operations under Part 11, it shall surrender that certificate to the designated office of the Authority. Termination of Address.

11.3. Rotorcraft External Loads

11.3.1. General

Applicability.

11.3.1.1.—(*a*) This subpart prescribes—

(1) Airworthiness certification rules for rotorcraft used in external-load operations, and

(2) Operating and certification rules governing the conduct of rotorcraft external-load operations in Nigeria.

(*b*) The certification rules of Part 11 do not apply to—

(1) Rotorcraft manufacturers when developing external-load attaching means,

(2) Operations conducted by a person demonstrating compliance for the issuance of a certificate or authorisation under Part 11,

(3) Training flights conducted in preparation for the demonstration of compliance with Part 11, or

(4) A local or national government conducting operations with public aircraft.

(*c*) For the purpose of Part 11, a person other than a crewmember or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.

11.3.2. Certification Rules

Certificate Required.

11.3.2.1.—(*a*) No person subject to Part 11 may conduct rotorcraft external-load operations without, or in violation of the terms of, a Rotorcraft External-Load Operator Certificate or equivalent authorisation issued by the Authority.

Duration of Certificate.

11.3.2.2.—(*a*) A Rotorcraft External-Load Operator Certificate is effective and valid for twenty four (24) months unless it is surrendered, suspended, or revoked.

Application for Certificate Issuance or Renewal.

11.3.2.3.—(*a*) Application for an original certificate or renewal of a certificate issued under Part 11 is made on a form, and in a manner, prescribed by the Authority.

Requirements for Issuance of a Rotorcraft External-Load Operator Certificate.

11.3.2.4.—(*a*) If an applicant shows that it complies with this subpart, the Authority will issue a Rotorcraft External-Load Operator Certificate to it.

(*b*) The Authority will issue authorisation to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable provisions of this subpart.

11.3.2.5.—(*a*) An applicant must have the exclusive use of at least one rotorcraft that— Rotorcraft.

(*b*) Was type certified under, and meets the requirements of, the several parts of these regulations which prescribe requirements for rotorcraft external-load operations,

(*c*) Complies with the certification provisions in this subpart that apply to the rotorcraft-load combinations for which authorisation is requested, and

(*d*) Has a valid standard or restricted category airworthiness certificate.

11.3.2.6.—(*a*) An applicant shall hold, or have available the services of at least one person who holds a current commercial or airline transport pilot licence issued by the Authority with a rating appropriate for the rotorcraft to be used. Personnel.

(*b*) An applicant shall designate one pilot, who may be the applicant, as chief pilot for rotorcraft external-load operations.

(*c*) An applicant may designate qualified pilots as assistant chief pilots to perform the functions of the chief pilot when the chief pilot is not readily available.

(*d*) The chief pilot and assistant chief pilots must be acceptable to the Authority and each must hold a current Commercial or Airline Transport Pilot Licence, with a rating appropriate for the rotorcraft to be used.

(*e*) The holder of a Rotorcraft External-Load Operator Certificate shall report any change in designation of chief pilot or assistant chief pilot immediately to the Authority.

(*f*) A newly designated chief pilot shall comply with the knowledge and skill requirements of this subpart within 30 days or the operator may not conduct further operations under the Rotorcraft External-Load Operator Certificate, unless otherwise authorised by the Authority.

11.3.2.7.—(*a*) The holder of a Rotorcraft External-Load Certificate may apply to the Authority for an amendment of its certificate, to add or delete a rotorcraft-load combination authorisation. Amendment of Certificate.

(*b*) The holder of a rotorcraft external-load certificate may apply for an amendment to add or delete a rotorcraft authorisation by submitting to the Authority a new list of rotorcraft, by registration number, with the classes of rotorcraft-load combinations for which authorisation is requested.

11.3.2.8.—(*a*) Each person conducting a rotorcraft external-load operation shall carry a facsimile of the Rotorcraft External-Load Operator Certificate in each rotorcraft used in the operation. Availability, Transfer, and Surrender of Certificate.

(*b*) A certificate holder shall return its certificate to the Authority—

(1) If the Authority suspends or revokes its Rotorcraft External-Load Operator Certificate, or

(2) If the certificate holder discontinues operations and does not resume operations within two years.

11.3.3. OPERATING RULES AND RELATED REQUIREMENTS

Operating Rules.

11.3.3.1.—(*a*) No person may conduct a rotorcraft external load operation without, or contrary to, the Rotorcraft/Load Combination Flight Manual prescribed in 11.3.4.4.

(*b*) No person may conduct a rotorcraft external load operation unless—

(1) The rotorcraft complies with 11.3.2.6, and

(2) The rotorcraft and rotorcraft/load combination is authorised under the Rotorcraft External Load Operator Certificate.

(*c*) Before a person may operate a rotorcraft with an external load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft/load combination is of the same class), that person shall conduct, in a manner that will not endanger persons or property on the surface, such of the following flight operational checks as the Authority determines are appropriate to the rotorcraft/load combination :

(1) A determination that the weight of the rotorcraft/load combination and the location of its centre of gravity are within approved limits, that the external load is securely fastened, and that the external load does not interfere with devices provided for its emergency release.

(2) Make an initial liftoff and verify that controllability is satisfactory.

(3) While hovering, verify that directional control is adequate.

(4) Accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.

(5) In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crewmembers or ground personnel may make this check and signal the pilot.

(6) Increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.

(*d*) Notwithstanding the provisions of Part 8, the holder of a Rotorcraft External Load Operator Certificate may conduct rotorcraft external load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following :

(1) The operator shall develop a plan for each complete operation and obtain approval for the operation from the Authority.

Note: The plan must include an agreement with the appropriate political subdivision that local officials will exclude unauthorised persons from the area in which the operation will be conducted, coordination with air traffic control, if necessary, and a detailed chart depicting the flight routes and altitudes.

(2) Each flight shall be conducted at an altitude, and on a route, that will allow a jettisonable external load to be released, and the rotorcraft landed, in an emergency without hazard to persons or property on the surface.

(*e*) Notwithstanding the provisions of Part 8, and except as provided in 11.3.4.3(*a*)(4), the holder of a Rotorcraft External Load Operator Certificate may conduct external load operations, including approaches, departures, and load positioning manoeuvres necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.

(*f*) No person may conduct rotorcraft external load operations under IFR unless specifically approved by the Authority.

Carriage of Persons.

11.3.3.2.—(*a*) No rotorcraft external load certificate holder may allow a person to be carried during rotorcraft external load operations unless that person—

(1) Is a flight crewmember,

(2) Is a flight crewmember trainee,

(3) Performs an essential function in connection with the external load operation, or

(4) Is necessary to accomplish the work activity directly associated with that operation.

(*b*) The PIC shall ensure that all persons are briefed before takeoff on all pertinent procedures to be followed (including normal, abnormal, and emergency procedures) and equipment to be used during the external load operation.

Crewmember Training, Currency, and Testing Requirements.

11.3.3.3.—(*a*) No certificate holder may use, nor may any person serve, as a pilot in rotorcraft external load operations unless that person—

(1) Has successfully demonstrated to the Authority the knowledge and skill with respect to the rotorcraft/load combination, and

(2) Has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with paragraph (*a*)(1) of this section.

(*b*) No rotorcraft external load certificate holder may use, nor may any person serve as, a crewmember or other operations personnel in Class D operations unless, within the preceding 12 calendar months, that person has successfully completed either an approved initial or a recurrent training programme.

(*c*) Notwithstanding the provisions of paragraph (*b*) of this section, a person who has performed a rotorcraft external load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo recurrent training.

11.3.4. AIRWORTHINESS REQUIREMENTS

Flight Characteristics Requirements.

11.3.4.1.—(*a*) The applicant must demonstrate to the Authority, by performing the following operational flight checks, that the rotorcraft-load combination has satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load weight (including the external-load attaching means) is the maximum weight for which authorisation is requested.

(*b*) *Class A rotorcraft-load combinations* : The operational flight check must consist of at least the following manoeuvres :

(1) Take off and landing.

(2) Demonstration of adequate directional control while hovering.

(3) Acceleration from a hover.

(4) Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.

(*c*) *Class B and D rotorcraft-load combinations* : The operational flight check must consist of at least the following manoeuvres :

(1) Pickup of the external load.

(2) Demonstration of adequate directional control while hovering.

(3) Acceleration from a hover.

(4) Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.

(5) Demonstrating appropriate lifting device operation.

(6) Manoeuvring of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.

(*d*) *Class C rotorcraft-load combinations* : For Class C rotorcraft-load combinations used in wire-stringing, cable-laying, or similar operations, the operational flight check must consist of the manoeuvres, as applicable, prescribed in paragraph (*c*) of this section.

11.3.4.2.—(*a*) *External-load attaching means*. Each external-load attaching means shall be approved by the Authority.

Structures and Design.

(*b*) *Quick release devices*. Each quick release device means shall be approved by the Authority.

(*c*) Weight and centre of gravity :

(*d*) *Weight*.—The total weight of the rotorcraft-load combination must not exceed the total weight approved for the rotorcraft during its type certification.

(*e*) *Centre of gravity*.—The location of the centre of gravity must, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force must be established at those values for which the effective location of the centre of gravity remains within its established range.

11.3.4.3.—(*a*) In addition to the operating limitations set forth in the approved Rotorcraft Flight Manual, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and set them forth in the Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations :

Operating Limitations.

(1) The rotorcraft-load combination may be operated only within the weight and centre of gravity limitations established in accordance with this subpart.

(2) The rotorcraft-load combination may not be operated with an external load weight exceeding that used in showing compliance with this subpart.

(3) The rotorcraft-load combination may not be operated at airspeeds greater than those established in accordance with this subpart.

(4) No person may conduct an external-load operation under Part 11 with a rotorcraft type certified in the restricted category over a densely populated area, in a congested airway, or near a busy airport where passenger transport operations are conducted.

(5) The rotorcraft-load combination of Class D may be conducted only in accordance with the following :

(*b*) The rotorcraft to be used must have been type certified under transport Category A for the operating weight and provide hover capability with one engine inoperative at that operating weight and altitude.

(1) The rotorcraft must be equipped to allow direct radio intercommunication among required crewmembers.

(2) The personnel lifting device must be approved by the Authority.

(3) The lifting device must have an emergency release requiring two distinct actions.

Rotorcraft-Load Combination Flight Manual.

11.3.4.4.—(*a*) The applicant must prepare a Rotorcraft-Load Combination Flight Manual and submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth—

(1) Operating limitations, procedures (normal and emergency), performance, and other information established under this subpart,

(2) The class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this subpart, and

(3) In the information section of the Rotorcraft-Load Combination Flight Manual—

(*i*) Information on any peculiarities discovered when operating particular rotorcraft-load combinations,

(*ii*) Precautionary advice regarding static electricity discharges for Class B, Class C, and Class D rotorcraft-load combinations, and

(*iii*) Any other information essential for safe operation with external loads.

Markings and Placards.

11.3.5.—(*a*) The following markings and placards must be displayed conspicuously and must be such that they cannot be easily erased, disfigured, or obscured :

(1) A placard (displayed in the cockpit or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been approved.

(2) A placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

Airworthiness Certification.

11.3.6.—(*a*) A Rotorcraft External-Load Operator Certificate is a current and valid airworthiness certificate for each rotorcraft type and listed by registration number on a list attached to the certificate, when the rotorcraft is being used in operations conducted under Part 11.

11.4. GLIDER TOWING

Applicability.

11.4.1.1.—(*a*) This subpart applies to those operations involving towing gliders by aircraft.

Certificate or Authorisation Required.

11.4.1.2.—(*a*) The Authority will require each person conducting glider towing operations covered by this subpart to hold a certificate or equivalent authorisation.

(*b*) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this subpart.

11.4.1.3.—(*a*) No person may operate an aircraft that is towing a glider unless : — Aircraft Requirements.

(1) The aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness, and

(2) The towline used has a breaking strength not less than 80 percent of the maximum certificated operating weight of the glider and not more than twice the maximum certificated operating weight.

(*b*) However, the towline used may have a breaking strength more than twice the maximum certificated operating weight of the glider if—

(1) A safety link is installed at the point of attachment of the towline to the glider with a breaking strength not less than 80 percent of the maximum certificated operating weight of the glider and not greater than twice this operating weight, or

(2) A safety link is installed at the point of attachment of the towline to the towing aircraft with a breaking strength greater, but not more than 25 percent greater, than that of the safety link at the towed glider end of the towline and not greater than twice the maximum certificated operating weight of the glider.

11.4.1.4.—(*a*) No person may act as a tow pilot for a glider unless that person has— — Experience and Training Requirements.

(1) At least a private pilot licence with a category rating for the tow aircraft,

(2) Logged at least 100 hours of pilot in command time in same aircraft category, class, and type, if applicable, as the tow aircraft,

(3) Received training in and instructor endorsement for—

(*i*) The techniques and procedures essential to the safe towing of gliders, including airspeed limitations,

(*ii*) Emergency procedures,

(*iii*) Signals used, and

(*iv*) Maximum angles of bank.

(4) Except as provided in paragraph (*b*) of this section, has completed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this section, and

(5) Except as provided in paragraph (*b*) of this section, has received a logbook endorsement from the pilot, described in paragraph (*a*)(4) of this section, certifying that the person has accomplished at least 3 flights in an aircraft while towing a glider, and

(6) Within the preceding 12 months has—

(*i*) Made at least three actual glider tows while accompanied by a qualified pilot who meets the requirements of this section, or

(*ii*) Made at least three flights as pilot in command of a glider towed by an aircraft.

(*b*) The pilot, described in paragraph (*a*)(4) of this section, who endorses the logbook of a person seeking towing privileges must have

(1) Met the requirements of this section prior to endorsing the logbook of the person seeking glider-towing privileges, and

(2) Logged at least 10 flights as pilot in command of an aircraft while towing a glider.

(*c*) If the pilot described in paragraph (*a*)(4) of this section holds only a private pilot licence, then that pilot must have,

(1) Logged at least 100 hours of pilot-in-command time in airplanes, or 200 hours of pilot in command time in a combination of powered and other tan powered aircraft, and

(2) Performed and logged at least three flights within the 12 calendar months preceding the month that pilot accompanies or endorses the logbook of a person seeking towing privileges—

(*i*) In an aircraft while towing a glider vehicle accompanied by another pilot who meets the requirements of this section, or

(*ii*) As pilot in command of a glider being towed by an aircraft.

Operating Rules.

11.4.1.5.—(*a*) No pilot may conduct any towing operation in controlled airspace until the pilot has received the appropriate clearance from the air traffic control service.

(*b*) No pilot may conduct any towing operation in uncontrolled airspace until the pilot has notified the appropriate Authority for such activity to be entered into the NOTAM service of Nigeria.

(*c*) No pilots shall engage in towing operations, either as the pilot of the towing aircraft or as the pilot of the towed glider, until all pilots have agreed upon a general course of action, including takeoff and release signals, airspeeds and emergency procedures for each pilot.

(*d*) No pilot of a civil aircraft may intentionally release a towline, after release of a glider, in a manner that endangers the life or property of another.

11.5. BANNER TOWING

Applicability.

11.5.1.1.—(*a*) This subpart applies to those operations involving towing by aircraft banners or other signs, lit or unlit.

11.5.1.2.—(*a*) The Authority will require each person conducting operations covered by this subpart to hold a certificate or equivalent authorisation.

Certificate or Authorisation Required.

(*b*) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this subpart.

(*c*) A helicopter operating under the provision of subpart 11.3 may tow a banner using an external-load attaching means without a certificate only if the operator has at least a Class B authorisation on the operating certificate.

11.5.1.3.—(*a*) No person may operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.

Aircraft Requirements.

(*b*) No person may operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter's tail rotor during all phases of flight, including autorotations.

11.5.1.4.—(*a*) For non-revenue flights, the pilot of the tow aircraft shall hold at least a valid private pilot licence and have a minimum of 200 hours PIC time.

Experience and Training Requirements.

(*b*) When banner towing operations are conducted for compensation or hire, the pilot shall have at least a commercial pilot licence (instrument rating not required) and at least a valid Class 1 medical certificate.

(*c*) All pilots engaged in banner towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

(*d*) This demonstration shall be observed from the ground to allow the Authority to evaluate the competence of any essential ground personnel as well as the flight operation.

11.5.1.5.—(*a*) All banner towing operations shall be conducted only—

Operating Rules.

(1) In VFR weather conditions, and

(2) Between the hours of official sunrise and official sunset.

(*b*) No person may conduct banner towing operations—

(1) Over congested areas or open air assemblies of persons lower than 1,000 feet, and

(2) Elsewhere lower than the minimum safe altitude requirements of Part 8.

(*c*) The certificate holder shall obtain the airport manager's approval to conduct banner tow operations.

(*d*) If banner towing operations take place at an airport with a control tower, the certificate holder shall inform that control tower of the time of the banner tow operation.

(*e*) The certificate holder shall notify the appropriate airport officials in advance when banner tow operations will be in close proximity to an uncontrolled airport.

(*f*) Only essential crewmembers shall be carried when conducting banner tow operations.

(*g*) When banner towing operations are conducted around congested areas, the pilot shall exercise due care so that, in the event of emergency release of the banner and/or towrope, it will not cause undue hazard to persons or property on the surface.

(*h*) Each pilot shall drop the towrope in a predesignated area at least 500 feet from persons, buildings, parked automobiles, and aircraft.

(*i*) Each pilot conducting banner towing operations shall carry onboard the aircraft a current copy of the following certificate of Waiver or Authorisation allowing banner towing operations.

11.6. TV AND MOVIE OPERATIONS

Applicability.

11.6.1.1.—(*a*) This subpart applies to those operations involving motion picture and television filming, appearance in flight in movies, and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.

(*b*) For purposes of this subpart, "movie" shall include film, videos, and live broadcast in any format, and the preparation and rehearsal for those operations.

Certificate or Authorisation Required.

11.6.1.2.—(*a*) The Authority shall require each person conducting operations covered by this subpart to hold a certificate or equivalent authorisation.

(*b*) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this subpart.

Aircraft Requirement.

11.6.1.3.—(*a*) In order to be used in motion picture and television filming operations, aircraft in the experimental category shall have an airworthiness certificate issued for the purpose of exhibition.

Experience and Training Requirements.

11.6.1.4.—(*a*) No pilot may conduct television and movie operations unless he or she has :

(1) A commercial licence with ratings appropriate to the category, class and type of aircraft to be used under the terms of the authorisation.

(2) At least 500 hours as PIC and at least 20 hours as PIC in the aircraft type.

(3) A minimum of 100 hours in the category and class of aircraft to be used.

(4) A minimum of 5 hours in the make and model aircraft to be used under the authorisation.

(5) If the pilot intends to perform acrobatics below 1,500 AGL, the pilot must hold a Statement of Acrobatic Competency for the operations to be performed.

Operating Rules and Waiver Requirements.

11.6.1.5.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.

(*b*) Each operator shall obtain a waiver from the Authority if filming sequences require an aircraft to be flown—

(1) In acrobatic flight below 1,500 AGL,

(2) Over a congested area,

(3) In controlled airspace, or

(4) In other instances where a departure from the requirements in Part 8 is needed.

(*c*) The holder of the authorisation shall provide a schedule of events that lists the—

(1) Identification of the aircraft, and

(2) Performers in the sequence of their appearance.

(*d*) Any manoeuvres added or time changes to the schedule of events shall be approved by the Authority.

(*e*) The authorisation holder shall develop, have approved by the Authority, and adhere to a Motion Picture and Television Flight Operations Manual.

(*f*) When conducting any filming operation requiring an authorisation, the certificate holder shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorised persons or vehicles enter the airspace where manoeuvres are being performed during the filming production event, efforts must be made to remove them.

Contents of a Motion Picture and Television Flight Operations Manual.

11.6.1.6.—(*a*) Each Motion Picture and Television Flight Operations Manual shall contain at least the following :

(1) *Company Organisation*.

(*i*) Business name, address, and telephone number of applicant.

(*ii*) List of pilots to be used during the filming, including their pilot licence numbers, grade, and class and date of medical.

(*iii*) List of aircraft by make and model.

(2) *Distribution and Revision*.—Procedures for revising the manual to ensure that all manuals are kept current.

(3) *Persons Authorised*.—Procedures to ensure that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 500 feet of the filming production area.

(4) *Area of Operations*.—The area that will be used during the term of the authorisation.

(5) *Plan of Activities*.—Procedures for the submission, within three days of scheduled filming, a written plan of activities to the Authority containing at least the following :

(*i*) Dates and times for all flights.

(*ii*) Name and phone number of person responsible for the filming production event.

(*iii*) Make and model of aircraft to be used and type of airworthiness certificate, including category.

(*iv*) Name of pilots involved in the filming production event.

(*v*) A statement that permission has been obtained from property owners and/or local officials to conduct the filming production event.

(*vi*) Signature of certificate holder or a designated representative.

(*vii*) A general outline, or summary, of the production schedule, to include maps or diagrams of the specific filming location, if necessary.

(6) *Permission to Operate*.—Requirements and procedures that the certificate holder will use to obtain permission from property owners and/or local officials (e.g., police, fire departments, etc.) as appropriate for the conduct of all filming operations when using the certificate/authorisation.

(7) *Security*.— Method of security that will be used to exclude all persons not directly involved with the operation from the location.

NOTE : *This should also include the provision that will be used to stop activities when unauthorised persons, vehicles, or aircraft enter the operations area, or for any other reason, in the interest of safety.*

(8) *Briefing of Pilot/Production Personnel*.—Procedures to brief personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event.

(9) *Certification/Airworthiness*.—Procedures to ensure that required inspections will be conducted.

(10) *Communications*.—Procedures to provide communications capability with all participants during the actual operation and filming.

NOTE : *The applicant can use oral, visual, or radio communications as along as it keeps the participants continuously apprised of the current status of the operation.*

(11) *Accident Notification*.—Procedures for notification and reporting of accidents.

11.7. SIGHT-SEEING FLIGHTS

11.7.1.1.—(*a*) This subpart applies to those operations involving the carriage of persons for viewing natural formations, manmade objects or wildlife viewing on the ground when those operations are conducted as part of a business enterprise or for compensation or hire, and Applicability.

(*b*) The flight is unquestionably advertised as "sight-seeing", and

(*c*) The flight returns to the airport of departure without having landed at any other airport,

(*d*) The flight is conducted within 25 statute mile radius of the departure airport, and

(*e*) The certificated passenger capacity of the aircraft does not exceed 9 passengers.

NOTE : *Any other passenger carrying flight for remuneration, hire or valuable consideration must be conducted under an Air Operator Certificate (AOC) as contained in Part* 9.

11.7.1.2.—(*a*) The Authority will require each person conducting operations covered by this subpart to hold a certificate or equivalent authorisation. Certificate or Authorisation Required.

(*b*) Each operator under this subpart shall hold an operating certificate issued under the provisions of this part.

11.7.1.3.—(*a*) No pilot may conduct sightseeing operations unless he or she has : Experience and Training Requirements.

(1) At least a commercial licence with ratings appropriate to the category, class and type of aircraft to be used under the terms of the waiver.

(2) At least 500 hours as PIC and at least 20 hours as PIC in the aircraft type.

(3) A minimum of 100 hours in the category and class of aircraft to be used.

(4) A minimum of 5 hours in the make and model aircraft to be used under the authorisation.

11.7.1.4.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight. Operating Rules.

(*b*) All sightseeing operations shall be conducted only—

(1) In VFR weather conditions, and

(2) Between the hours of official sunrise and official sunset.

(*c*) No person may conduct sightseeing operations—

(1) Over congested areas or open air assemblies of persons lower than 1,000 feet, and

(2) Elsewhere lower than the minimum safe altitude requirements of Part 8.

(*d*) The requirements of Part 8 apply to sightseeing operations described by this subpart.

11.8. FISH SPOTTING

Applicability.

11.8.1.1.—(*a*) This subpart applies to those operations involving location, tracking, and reporting on the location of fish and fish schools, when those operations are conducted as part of a business enterprise or for compensation or hire.

Certificate or Authorisation Required.

11.8.1.2.—(*a*) The Authority will require each person conducting operations covered by this subpart to hold a certificate or equivalent authorisation.

(*b*) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this subpart.

Operating Rules.

11.8.1.3.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.

(*b*) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an authorisation under this subpart.

Experience and Training Requirements.

11.8.1.4.—(*a*) No pilot may conduct fish spotting operations unless he or she has :

(1) At least a commercial licence with ratings appropriate to the category and class aircraft to be used under the terms of the waiver.

(2) At least 500 hours as PIC.

(3) A minimum of 100 hours in the category and class of aircraft to be used.

11.9. NEWS MEDIA AND TRAFFIC REPORTING

11.9.1.1.—(*a*) This subpart applies to those operations involving the observation of, and reporting on, news media events and/or vehicular traffic conditions on the highways and streets when conducted by aircraft or airmen, or both, not designated as solely public use. Applicability.

11.9.1.2.—(*a*) The Authority will require each person conducting operations covered by this subpart to hold a certificate or equivalent authorisation. Certificate or Authorisation Required.

(*b*) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this subpart.

11.9.1.3.—(*a*) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight. Operating Rules.

(*b*) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an authorisation under this subpart.

11.9.1.4.—(*a*) No pilot may conduct news media or traffic reporting operations unless he or she has : Experience and Training Requirements.

(1) At least a commercial licence with ratings appropriate to the category, class and type aircraft to be used under the terms of the waiver.

(2) At least 500 hours as PIC and at least 20 hours as PIC in the aircraft type.

(3) A minimum of 100 hours in the category and class of aircraft to be used.

(4) A minimum of 5 hours in the make and model aircraft to be used under the authorisation.

11.10. RESERVED

11.11. RESERVED

11.12. AVIATION RECREATION ORGANISATIONS

11.12. GENERAL

11.12.1. Applicability

11.12.1.1.—(1) This Part applies to the approval and operation of organisations whose members operate for recreational purposes— Applicability.

(*a*) microlight aeroplanes and powered paragliders ;

(*b*) gliders ;

(*c*) free balloons ;

(*d*) gyroplanes ;

(*e*) hang gliders and non-powered paragliders ;

(*f*) parachutes ; or

(*g*) non-type certificated aircraft.

(2) This Part does not apply in respect of—

(*a*) the holder of an ATL Nig. CARs Part 18.2 and AOP Nig. CARs Part 18.2.3.

(*b*) any person who wishes to operate on an ATL or AOP.

(*c*) any person exempted by the Authority under Nig. CARs Part 1.

Display of aviation recreation organisation approval.

11.12.1.2. The holder of an aviation recreation organisation approval shall display the approval in a prominent place, generally accessible to the public at such holder's principal place of business and, if a copy of the approval is displayed, shall produce the original approval to an authorised officer, inspector or authorised person if so requested by such officer, inspector or person.

Advertise-ments.

11.12.1.3.—(1) Any advertisement by an organisation indicating that it is an aviation recreation organisation, shall—

(*a*) reflect the number of the aviation recreation organisation approval issued by the Authority, and

(*b*) contain a reference to the aviation recreation for which such approval was issued.

Safety inspections and audits.

11.12.1.4.—(1) An applicant for the issuance of an aviation recreation organisation approval shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to verify the validity of any application made in terms of regulation 11.12.2.5.

(2) The holder of an aviation recreation organisation approval shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

Register of approvals.

11.12.1.5.—(1) The Authority shall maintain a register of all aviation recreation organisation approvals issued in terms of the regulations in this Part.

(2) The register shall contain the following particulars—

(*a*) the full name of the holder of the approval ;

(*b*) the postal address of the holder of the approval ;

(*c*) the date on which the approval was issued or renewed ;

(d) particulars of the scope of the approval issued to the holder of the approval ; and

(*e*) the nationality of the holder of the approval.

(3) The particulars referred to in sub-regulation (2) shall be recorded in the register within seven days from the date on which the approval is issued by the Authority.

(4) The register shall be kept in a safe place at the office of the Director-General.

(5) A copy of the register shall be furnished by the Director General, on payment of the appropriate fee, to any person who requests the copy.

11.12.2. APPROVAL OF AVIATION RECREATION ORGANISATION

No organisation shall undertake aviation recreation except under the authority of, and in accordance with the provisions of, an aviation recreation organisation approval issued under this Subpart.

Manual of procedure.

11.12.2.1.—(1) An applicant for the issuance of an aviation recreation organisation approval to undertake aviation recreation, shall provide the Authority with its manual of procedure which shall—

(*a*) comply with the requirements prescribed in this Subpart ; and

(*b*) contain the information as prescribed in IS 11.12.2.1.

Quality control system.

11.12.2.2.—(1) The applicant shall establish a quality control system for the control and supervision of the aviation covered by the application.

(2) The minimum standards for a quality control system shall be as prescribed in IS 11.12.2.2.

Personnel requirements.

11.12.2.3.—(1) The applicant shall engage, employ or contract—

(*a*) a senior person identified as the accountable manager and compliance officer of the organisation concerned, to whom contractual authority has been granted to ensure that all activities undertaken by the organisation are carried out in accordance with the applicable requirements prescribed in this Subpart, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements :

(*i*) Unrestricted access to work performed or activities undertaken by all other persons as employees of, and other persons rendering service under contract with, the organisation ;

(*ii*) full rights of consultation with any such person in respect of such compliance by him or her ;

(*iii*) powers to order cessation of any activity where such compliance is not effected ;

(*iv*) a duty to establish liaison mechanisms with the Authority with a view to ascertain correct manners of compliance with the said requirements, and interpretations of such requirements by the Director General, and to facilitate liaison between the Authority and the organisation concerned ; and (*v*) powers to report directly to the management of the organisation on his or her investigations and consultations generally, and in cases contemplated in subparagraph (*iii*), and with regard to the results of the liaison contemplated in subparagraph (*iv*) ;

(*b*) a competent person who is responsible for quality control, and who has direct access to the accountable manager and compliance officer referred to in paragraph (*a*) on matters affecting airworthiness and aviation safety ; and

(*c*) adequate personnel to carry out and supervise the aviation recreation covered by the application.

(2) The applicant shall—

(*a*) establish a procedure for initially assessing, and a procedure for maintaining, the competence of those personnel authorised by the applicant to carry out and supervise the aviation recreation covered by the application ; and

(*b*) provide the personnel referred to in paragraph (*a*) with written proof of the scope of their authorisation.

Resource requirements.

11.12.2.4. The applicant shall ensure that the resources are adequate to enable the personnel to carry out and supervise the aviation recreation covered by the application.

Application for approval or amendment thereof.

11.12.2.5.—(1) An application for the issuance of an aviation recreation organisation approval to undertake aviation recreation, or an amendment thereof, shall be—

(*a*) made to the Authority in the appropriate form ; and

(*b*) accompanied by—

(*i*) the appropriate fee, and

(*ii*) the manual of procedure referred to in regulation 11.12.2.1.

Issuing of approval.

11.12.2.6.—(1) The Authority shall issue to an applicant approval to undertake aviation recreation, if the applicant complies with the requirements prescribed in regulations 11.12.2.1. to 11.12.2.4. inclusive.

(2) The Authority shall issue the approval on the appropriate form.

Scope of approval.

11.12.2.7.—(1) An aviation recreation organisation approval to undertake aviation recreation shall specify—

(*a*) the aviation recreation which the holder of the approval is entitled to undertake ; and

(*b*) the procedures which the holder of the approval is authorised to establish and administer.

11.12.2.8.—(1) An aviation recreation organisation approval to undertake aviation recreation, shall be valid for the period determined by the Authority, which period shall not exceed two years, calculated from the date of issuing or renewal thereof.

Period of validity.

(2) The approval shall remain in force until it expires or is suspended by an authorised officer, inspector or authorised person, or cancelled by the Authority.

(3) The holder of an approval which is revoked or suspended, shall, within 30 days from the date on which the approval is revoked or suspended, surrender such approval to the Authority.

11.12.2.9.—(1) Subject to the provisions of sub-regulation (2), an aviation recreation organisation approval to undertake aviation recreation, shall not be transferable.

Transferability.

(2) A change in ownership of the holder of an approval to undertake aviation recreation, shall be deemed to be a change of significance referred to in regulation 11.12.2.10.

11.12.2.10.—(1) If the holder of an aviation recreation organisation approval to undertake aviation recreation, desires to make any change in the quality control system referred to in regulation 11.12.2.2, which is significant to the showing of compliance with the appropriate requirements prescribed in this Part, such holder shall apply to the Authority for the approval of such change.

Changes in quality control system.

(2) The provisions of regulation 11.12.2.5 shall apply with the necessary changes to an application for the approval of a change in the quality control system.

(3) An application for the approval of a change in the quality control system shall be granted if the applicant satisfies the Authority, upon submission of appropriate proposed changes to its manual of procedure, that it will continue to comply with the provisions of regulations 11.12.2.1. to 11.12.2.4 inclusive, after the implementation of such approved change.

11.12.1.11.—(1) An application for the renewal of an aviation recreation organisation approval to undertake aviation recreation, shall be—

Renewal of approval.

(*a*) made to the Director General in the appropriate form as prescribed by the Authority ; and

(*b*) accompanied by—

(*i*) the appropriate fee.

(*ii*) the manual of procedure referred to in regulation 11.12.2.1.

(2) The holder of the approval shall at least 60 days before the date on which such approval expires, apply for the renewal of such approval.

Duties of holder of approval.

11.12.2.12. The holder of an aviation recreation organisation approval to undertake aviation recreation, shall—

(*a*) hold at least one complete and current copy of its manual of procedure referred to in regulation 11.12.2.1, at each recreation facility specified in the manual of procedure ;

(*b*) comply with all procedures detailed in the manual of procedure ;

(*c*) make each applicable part of the manual of procedure available to the personnel who require those parts to carry out their duties ; and

(*d*) continue to comply with the appropriate requirements prescribed in this Part.

Technical and regulatory data.

11.12.2.13.—(1) The holder of an aviation recreation organisation approval shall keep copies of all relevant equipment manuals, technical bulletins and instructions, legislation, and any other documents which may be necessary to establish procedures for the aviation recreation specified in its manual of procedure.

(2) The holder of the approval shall establish procedures to control and amend the documents referred to in sub-regulation (1).

(3) The procedures referred to in sub-regulation (2) shall ensures that—

(*a*) all documents are reviewed and authorised before the issuing thereof ;

(*b*) changes to documents are reviewed and authorised by the holder of the approval ;

(*c*) the current version of each document can be identified to preclude the use of out of date editions ;

(*d*) current issues of data and documents are held by those personnel within the aviation recreation organisation who require such data and documents to carry out their duties ; and

(*e*) obsolete documents are promptly removed from circulation.

Records.

11.12.2.14.—(1) The holder of an aviation recreation organisation approval shall establish procedures to identify, collect, index, store, maintain and dispose of, the records which are necessary for the aviation recreation specified in its manual of procedure.

(2) The procedures referred to in sub-regulation (1) shall ensure that—

(*a*) a record is kept of each quality control review of the holder of the approval ;

(*b*) all records are legible ; and

(*c*) all records are kept for a period of at least five years calculated from the date of the last entry made in such records.

11.12.2.15.—(1) The holder of an aviation recreation organisation approval which authorises operational and maintenance procedures to be established, shall establish operational and maintenance procedures for the aviation recreation specified in its manual of procedure. Operational and maintenance procedures.

(2) The procedures referred to in sub-regulation (1) shall—

(*a*) be relevant and not in conflict with the appropriate procedures prescribed in the Regulations ; and

(*b*) be administered to ensure that the requirements—

(*i*) remain valid for their intended use ; and

(*ii*) are reviewed on a regular basis.

(3) The procedures referred to in sub-regulation (1) shall include details of—

(*a*) the manner in which the holder selects launching, flying and landing sites ;

(*b*) the holder's use of ground signals ;

(*c*) the holder's use of aerodromes or heliports ;

(*d*) the holder's launching methods ; and

(*e*) an emergency response plan.

11.13. OPERATION OF NON-TYPE CERTIFICATED AIRCRAFT

11.13.1. GENERAL PROVISIONS

11.13.1.1.—(1) This Part applies to— Applicability.

(*a*) non-type certificated aircraft operated in Nigeria ;

(*b*) non-type certificated aircraft registered in Nigeria ;

(*c*) persons acting as flight crew members of non-type certificated aircraft registered in Nigeria ; and

(*d*) persons who are on board a non-type certificated aircraft operated in terms of this Part.

(2) The provisions of the various other Parts of these regulations shall apply with the necessary changes to any non-type certificated aircraft unless specifically exempted by the provisions of this Part.

(3) Non-type certificated aircraft operated in terms of this Part are prohibited from providing a commercial air transport operation, as defined in Part 1 of the regulations.

(4) Although flying training is not considered to be a commercial air transport operation, any non-type certificate aircraft used in flight training shall be operated in terms of Part 11.13.

(5) Notwithstanding the provision of sub-regulations (3) and (4), non-type certificated aircraft operated in terms of this Part may be used for the training of its registered owner: Provided the training is provided by an ATO approved in terms of Part 3 and the airworthiness requirements in respect of a non-type certificated aircraft used in training are met.

(6) The proviso in sub-regulation (5), does not apply in respect of the conversion training contemplated if—

(*a*) The owner shall be a licensed pilot, holding the appropriate category and class rating, and having been converted on type by an appropriately rated flight instructor.

(*b*) Apart from any conversion training, which may be required in terms of (*a*) above, no flight training may be conducted on an aircraft, operated in terms of a proving flight authority.

Authority to fly.

11.13.1.2.—(1) No person shall operate a non-type certificated aircraft unless—

(*a*) in the case of aircraft classified in the paragraphs (*i*) to (*vii*) below :

(*i*) Aeroplanes, including microlight aeroplanes.

(*ii*) Helicopters.

(*iii*) Gyroplanes and gyrogliders.

(*iv*) Gliders, including self-launching gliders and touring gliders.

(*v*) Manned captive and manned free balloons.

(*vi*) Airships.

(*vii*) Unmanned aerial vehicles for such aircraft an authority to fly or proving flight authority has been issued in terms of these regulations ;

(*b*) the aircraft is in an airworthy condition ; and

(*c*) the PIC is the holder of a valid pilot licence with the appropriate rating for the particular category and type of non-type certificated aircraft.

(2) In the case of a foreign-registered non-type certificated aircraft, prior written permission by the Director-General is required before such aircraft may enter Nigeria.

(3) The permission referred to in sub-regulation (2) shall normally be granted only—

(*a*) for a limited period of time ;

(*b*) for the purpose of participation in international events within Nigeria, for recordbreaking purposes or demonstration flights, or at the discretion of the Director-General if an acceptable level of safety can be shown and public safety is not jeopardized ;

(*c*) proof is submitted that for the aircraft an authority to fly or similar certificate was issued by the foreign civil aviation authority or an organisation designated for the purpose by such authority ; and

(*d*) if the aircraft is made available for inspection by a licensed AME or AMO or an Approved Person with the relevant rating or approval, or by any other person designated for the purpose by the Director-General, as soon as possible after its arrival in Nigeria, and an inspection report has been submitted to the Director-General.

11.13.2. FLIGHT CREW

Ex-military aircraft.

11.13.2.1.—(1) Pilot Licensing—General Requirements

(*a*) No person shall act as pilot of a Nigerian registered ex-military aircraft unless such person is the holder of a PPL or higher category pilot licence with the appropriate category and type rating, issued or validated in terms of Part 2.3.

(*b*) A type-rating shall be issued by the Director-General once the licence holder has completed the required training as detailed in Part 2, as applicable, and has submitted the required type rating forms, logbook copies, technical examination and payment as specified in these regulations to the Director-General. The currency of the type rating shall be in accordance with the provisions of Part 2.3 of these regulations.

(*c*) Before performing acrobatic flight in an aircraft that has been certificated for, or is capable of performing acrobatic flight, the PIC shall also be the holder of an acrobatic rating issued by the Director-General or by an organisation designated for the purpose in terms of Part 11.12, as the case may be.

(*d*) The Director-General may exempt a candidate from undergoing all or part of the prescribed training if he or she is satisfied that the candidate—

(*i*) has sufficient flying experience on similar types of aircraft ; or

(*ii*) is the holder of a foreign type rating for the aircraft type and the Director General is satisfied that the training was of an acceptable standard.

(2) Pilot Training on Ex-Military Jet Aircraft

(*a*) Pilots wishing to be rated to fly ex-military jet aircraft shall have the appropriate flying experience. Conversion, refresher and technical training requirements for these aircraft will be assessed on an individual basis by the Director-General, after receiving the relevant documentation.

(*b*) Flying training is not allowed prior to the approval of the applicable syllabus.

(*c*) Pilots who have little or no military jet or high-performance piston-engine or turbo-prop aircraft experience shall be required to undergo rigorous and detailed conversion training according to the syllabus prescribed in IS 11.13.2.1.

(*d*) Guidelines for the establishment of training and acrobatic training criteria for individual applicants are provided in IS 11.13.2.1.

(*e*) The applicant shall supply the information as detailed in IS 11.13.2.1 when applying for approval of the training criteria referred to in paragraph (*a*).

(*f*) The Director-General may allow a Grade II or Grade I flight instructor with the appropriate category and type rating to determine how many hours of acrobatic training may be counted towards the conversion training prescribed by paragraph (*c*).

(*g*) In the case of an ex-military aircraft that is available in a single-seat version only, the Director-General may accept the training requirements for single-seat aircraft of the air force of the country of origin, or—where not available—training may be simulated in a similar aircraft. The Director General will treat each application for a type rating on a single-seat type on its merits.

(*h*) For training purposes, the Director-General may permit the candidate to enter into an arrangement with an owner of a similar aircraft type that has a valid Authority to Fly, e.g. a dual-seat training variant or dual-seat aircraft of similar performance : Provided that :

(*i*) the candidate has obtained permission from the Director General to place the aircraft type for which the training is required on the Nigerian Civil Aircraft Register ;

(*ii*) the candidate and the owner of the training variant submit to the Director-General for approval the commercial agreement for the use of the aircraft ;

(*iii*) the owner submits to the Director-General the insurance documentation stating that the candidate may undergo training on the aircraft ; and

(*v*) the Director-General issues a revised authority to fly for the aircraft stipulating that it may be used for the training of the candidate.

11.13.3. DOCUMENTATION AND RECORDS

Operations manual.

11.13.3.1.—(1) The owner or operator of—

(*a*) a veteran aeroplane with a maximum all-up mass in excess of 5 700kg or with more than 9 passenger seats ;

(*b*) a veteran helicopter with a maximum all-up mass in excess of 3 175kg ;

(*c*) an ex-military jet aircraft ; or

(*d*) any non-type certificated aircraft, classified in any of the paragraphs (*i*) to (*vii*) in regulation 11.13.1.2(1)(*a*) and operated by an ATO approved in terms of Part 3 for the purpose of providing flying training, shall draw up an operations manual containing all information required under this Part, and if applicable, required under Part 11.13 of these Regulations, whether the aircraft is to be operated in commercial air transport operations or not. The operations manual shall set out the manner in which the owner will operate and maintain the aircraft.

(2) The owner shall submit the operations manual in duplicate for approval to the Director General.

(3) If the Director-General is satisfied that the owner will comply with the provisions of the relevant Parts of the Regulations, he or she shall certify in writing on both copies of the operations manual that such manual has been approved and shall return one copy of the approved operations manual to the owner.

(4) The owner shall submit any amendment to an approved operations manual in duplicate for approval to the Director-General.

(5) If the Director-General is satisfied that the owner will comply with the provisions of the relevant Parts of the Regulations, he or she shall certify in writing on both copies of the amendment to the approved operations manual that such amendment has been approved and shall return one copy of the approved amendment to the owner.

(6) The owner shall at all times operate the aircraft, referred to in sub-regulation (1), in accordance with the approved operations manual or an approved amendment thereto.

(7) The owner shall—

(*a*) ensure that all operations personnel are able to understand the technical language used in those sections of the operations manual which pertain to their duties ;

(*b*) ensure that every flight is conducted in accordance with the operations manual and that those parts of the operations manual which are required for the conduct of a flight, are easily accessible to the flight crew members on board ;

(*c*) make the operations manual available for the use and guidance of operations personnel ;

(*d*) provide the flight crew members with their own personal copy of the sections of the operations manual which are relevant to the duties assigned to them ;

(*e*) keep the operations manual up to date ; and (*f*) keep the operations manual in a safe place.

(8) The contents of the operations manual shall not contravene the conditions contained in the authority to fly issued to the owner in terms of Part 2 of these Regulations.

(9) The structure and contents of the operations manual referred to in sub-regulation (1) shall be as prescribed in Part 9 of these Regulations.

Logbooks.

11.13.3.2.—(1) For any veteran or ex-military aircraft, and for any non-type certificated aircraft used in a commercial air transport operation or for the provision of flight training, appropriate airframe, engine and propeller logbooks, as applicable, shall be maintained in accordance with the provisions of these Regulations.

(2) Notwithstanding the provisions of sub-regulation (1), the owner or operator of an ex-military aircraft may continue to use the equivalent document or documents used by the previous military operator for the recording of flight times and maintenance carried out.

(3) Notwithstanding the provisions of these, the following non-type certificated aircraft are exempted from keeping the logbooks, prescribed by these regulations to the extent stated :

(*a*) *balloons* : record of maintenance to be kept in accordance with the approved maintenance programme ;

(*b*) *parachutes* : record of maintenance assembly packing to be kept in a logbook or a separate log page approved by the Director General or the organisation designated for the purpose in terms of Part 11.12, as the case may be ;

(*c*) model aircraft.

11.13.4. COMMUNICATION AND NAVIGATION EQUIPMENT

Communication equipment.

11.13.4.1.—(1) Notwithstanding the provisions of regulation 7.3 of these Regulations, the prescribed communication equipment is not required for aircraft operated in Class G airspace under VFR.

(2) Unmanned free balloons and unmanned aerial vehicles shall carry the equipment as prescribed in the authority to fly or in terms of regulation 11.13.6.6.

(3) Notwithstanding the provisions of sub-regulation (1), at sites where and when paragliding, hang-gliding, or parachute descents takes place, the persons involved shall preferably arrange for the automatic transmission on the applicable flight information frequency of a warning that such activity takes place, or alternatively make use of a hand-held transceiver to warn other aircraft in the vicinity.

(*d*) Notwithstanding the provisions of sub-regulation (1) and (3), at sites where aero-towing of hang-gliders takes place, the use of the appropriate communication equipment, either airborne or ground-based, to warn other air traffic in the vicinity that aero-towing is in progress is mandatory.

(*e*) The Director General may authorise in writing the Nigerian Airspace Management Agency (NAMA) to allocate a temporary segregated airspace (TSA) to separate aircraft operating without radio from other air traffic.

11.13.5. RULES OF THE AIR

Conditions for Flight.

11.13.5.1.—(1) Unless granted permission by the Director General or the organisation designated for the purpose in terms of Part 11.12, as the case may be, on a case-by-case basis, a non-type certificated aircraft may not be flown—

(*a*) by night ;

(*b*) in meteorological conditions less than those prescribed as suitable for flight under VFR ;

(*c*) within controlled airspace, unless cleared by and on conditions prescribed by ATC ; or

(*d*) within 5 NM from the aerodrome reference point of an aerodrome, licensed or approved in terms of Part 14 of these regulations and situated in Class G airspace, unless established unmanned aerodrome procedures for the particular aerodrome can be adhered to ; or

(*e*) unless unavoidable, over built up areas and open-air assemblies of persons except for the purpose of take-off, transit and landing.

(2) Notwithstanding the provisions of sub-regulation (1) a non-type certificated aircraft may operate under IFR conditions by day if it has been granted permission in terms of these Regulations, depending on the results of the proving flights and equipment installed.

(3) Notwithstanding the provisions of sub-regulation (1)(*e*), paragliders and hangliders, and powered versions thereof, may fly over built up areas provided they are foot-launched.

Aircraft speed.

11.13.5.2. Notwithstanding the provisions of Part 8, the Director General may authorise in writing the NAMA to allocate a TSA in which aircraft may be flown at :

(1) Mach 0.90 if below 5 000 feet AGL ;

(2) Mach 0.95 if between 5 000 feet AGL and FL 300 ; and

(3) supersonic speeds if at or above FL 300.

11.13.6. Flight Operations

Standards and procedures.

11.13.6.1.—(1) Any person operating a non-type certificated aircraft for aviation recreational purposes or in air displays, shall comply with the standards and procedures determined by the organisation designated for the purpose in terms of Part 11.12, if any, and if applicable.

(2) Any person operating a non-type certificated aircraft for aviation recreational purposes shall be a *bona fide* member of an applicable aviation recreation organisation designated by the Director-General in terms of Part 11.12 and abide by its constitution and code of conduct, if any.

(3) For the purposes of this Subpart, and until such time that an organisation has been approved in terms of Part 11.12, any person operating a non-type certificated aircraft for aviation recreational purposes or in air displays, shall comply with the flight operation standards and procedures prescribed for its members by the national body representative of the particular aviation sport, provided that these standards and procedures include those prescribed in, and are not in conflict with, the provisions of this Part.

Operation of paragliders, including powered paragliders and paratrikes.

11.13.6.2.—(1) Notwithstanding the provisions of—

(*a*) Regulation 8.2.1.6 and regulation 8.2.1.8, a person may operate a paraglider without carrying on board a current, approved flight manual or flight folio ;

(*b*) Regulation 8.2.1.8, a person may operate a paraglider without a certificate of release to service ;

(*c*) Part 7, a person may operate a paraglider if the paraglider has been equipped with—

(*i*) a safety harness or safety belt for each person on board the paraglider ;

(*ii*) in the case of flights above 500 feet AGL, an altimeter that is accurate to within approximately 100 feet ; and

(*iii*) in the case of flight over water beyond gliding distance from shore, one lifejacket or individual flotation device for each person on board, worn by such persons.

(*d*) Regulation Part 8.8.1.13(*f*), the PIC of a paraglider, overtaking another paraglider or hangglider soaring on a ridge, shall pass on the ridge side of the overtaken paraglider or hangglider ;

(*e*) Regulation Part 8.8.3.1, a person may operate a paraglider to 500 feet vertically below cloud—

(*i*) up to a maximum altitude of 19 500 feet above MSL in class G airspace ; and (*ii*) up to a maximum altitude of 19 500 feet above MSL in Class E airspace, other than transponder-mandatory airspace ;

(*f*) Regulation Part 8.14.2.7, the PIC of a paraglider may fly the paraglider below 500 feet AGL for the purpose of ridge soaring if such paraglider is flown in a manner that does not endanger persons or property on the ground ;

(*g*) Part 14, the pilot in-command of a paraglider may use any suitable area to launch the paraglider : Provided permission has been obtained from the owner of the site or the local authority having jurisdiction ; and provided further that in the case of flight training or tandem operations, only launch sites approved by the Director-General or by the organisation designated for the purpose in terms of Part 11.12, as the case may be, shall be used.

(2) Each person on board a paraglider shall wear a serviceable, rigid, protective helmet of a type approved by the Director-General or by the organisation designated for the purpose in terms of Part 11.12.

(3) In addition to the restrictions imposed by Part 8, no paraglider operation shall be conducted over a built-up area higher than 19 500 feet above MSL.

(4)(*a*) On every winch, used for the launching of paragliders, a means shall be provided for the severing of the launching cable.

(*b*) The means referred to in paragraph (*a*) shall be subject to the approval of the Director-General or the organisation, approved for the purpose in terms of Part 11.12, as the case may be, and shall be so positioned that it can be easily and readily operated by the winch operator.

(5)(*a*) No person may operate a paraglider with a passenger, unless that person holds a valid tandem rating.

(*b*) Tandem operations shall be limited to two persons, including the pilot.

(*c*) For tandem operations the carriage of a back-up parachute is compulsory.

Operation of gyroplanes.

11.13.6.3.—(1) Notwithstanding the provisions of—

(*a*) Regulations 8.2.1.6 and 8.5.1.8, a person may operate a non-type certificated gyroplane or gyroglider without carrying on board a current, approved flight manual or flight folio ;

(*b*) Part 7, a person may operate a non-type certificated gyroplane or gyroglider if the gyroplane or gyroglider has been equipped with—

(*i*) a seat with an approved safety harness or safety belt for each person on board the gyroplane or gyroglider ;

(*ii*) a map which covers the complete route of the proposed flight ;

(*iii*) in the case of flights above 500 feet AGL, an altimeter that is accurate to within approximately 100 feet ;

(*iv*) a rotor brake ; and

(*v*) in the case of flight over water beyond autorotative distance from shore, one lifejacket or individual flotation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons.

(2) In addition to the restrictions imposed by Part 8.8, no gyroplane or gyroglider operation shall be conducted above 500 feet AGL unless fitted with an approved, serviceable compass.

Operation of manned free balloons.

11.13.6.4.—(1) Notwithstanding the provisions of Part 7, a person may operate a non-type certificated manned free balloon if the balloon has been equipped with—

(*a*) a map which covers the complete route of the proposed flight ;

(*b*) an approved sensitive altimeter ;

(*c*) a rate-of-climb indicator ;

(*d*) a fire extinguisher ;

(*e*) gloves ;

(*f*) a handling line ;

(*g*) in the case of a hot-air balloon :

(*i*) two alternate methods of ignition ;

(*ii*) a fuel quantity gauge ;

(*iii*) envelope temperature indicator ; and

(*h*) in the case of flight over water, one lifejacket or individual flotation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons.

Operation of captive balloons.

11.13.6.5.—(1) Captive balloons are exempted from these regulations—

(*a*) except from Part 8.8 ; and

(*b*) provided that no captive balloon operation shall be conducted—

(*i*) higher than 150 feet above the surface ; or

(*ii*) from or above a public road; unless with the prior approval of the Director General and on conditions determined by him or her.

(2) In the event of a captive balloon breaking free from its moorings, the operator thereof shall immediately report the occurrence to the nearest ATC, indicating the direction in which the balloon is drifting.

Operation of unmanned free balloons.

11.13.6.6.—(1) Unmanned free balloons are exempted from these regulations, except that no unmanned free balloon operations shall take place without the prior permission of the Director General and on the conditions determined by him or her.

(2) For purposes of this regulation, the mass release of toy balloons shall be considered to be the launch of an unmanned free balloon.

11.13.6.7.—(1) Notwithstanding the provisions of—

Operation of amateur-built or production-built aircraft, including microlight aeroplanes.

(*a*) Regulation 8.2.1.6 and Regulation 8.2.1.8, a person may operate an amateur-built or production-built aircraft, including a microlight aeroplane, without carrying on board a current, approved flight manual or flight folio should such carriage not be safely possible ;

(*b*) Part 7, a person may operate an amateur-built or production-built aircraft, including a microlight aeroplane, if the aircraft has been equipped with—

(*i*) a seat with an approved safety harness or safety belt for each person on board the aircraft ;

(*ii*) a map which covers the complete route of the proposed flight ; and

(*iii*) in the case of flight over water beyond gliding distance from shore, one lifejacket or individual floatation device for each person on board, stored in a position easily accessible for such persons or alternatively worn by such persons.

11.13.6.8.—(1) Notwithstanding the provisions of—

Operation of gliders.

(*a*) Regulation 8.2.1.6 and Regulation 8.2.1.8, a person may operate a non-type certificated glider without carrying on board a current, approved flight manual or flight folio should such carriage not be safely possible ;

(*b*) Part 7, a person may operate a non-type certificated glider if the glider has been equipped with—

(*i*) a seat with an approved safety harness or safety belt for each person on board the glider ;

(*ii*) a map which covers the complete route of the proposed flight ;

(*iii*) in the case of flights above 500 feet, an altimeter that is accurate to within approximately 100 feet ;

(*iv*) vertical speed indicator or similar instrument ; and

(*v*) in the case of flight over water beyond gliding distance from shore, one lifejacket or individual flotation device for each person on board, stored in a position easily accessible for such persons, or alternatively worn by such persons ;

(*c*) Part 14, in the event of an unavoidable out-landing a person may land a glider, at a suitable site other than an airfield.

(2)(*a*) On every winch, used for the launching of gliders, a means shall be provided for the severing of the launching cable.

(*b*) The means referred to in paragraph (*a*) shall be subject to the approval of the Director-General or the organisation, approved for the purpose in terms of Part 11.12, as the case may be, and shall be so positioned that it can be easily and readily operated by the winch operator.

Operation of hang-gliders.

11.13.6.9.—(1) Notwithstanding the provisions of—

(*a*) Regulation 8.2.1.6 and Regulation 8.2.1.8, a person may operate a hang-glider without carrying on board a current, approved flight manual or flight folio ;

(*b*) Regulation 8.2.1.8, a person may operate a hang-glider without a certificate of release to service ;

(*c*) Part 7, a person may operate a hang-glider if the hang-glider has been equipped with—

(*i*) an approved safety harness or safety belt for each person on board the hang glider ;

(*ii*) in the case of flights above 500 feet AGL, an altimeter that is accurate to within approximately 100 feet ; and

(*iii*) in the case of flight over water one lifejacket for each person on board and worn by such persons ;

(*d*) Regulation 8.8.1.12(*f*) the person operating a hang-glider overtaking another hang-glider or paraglider soaring on a ridge shall pass on the ridge side of the overtaken hang-glider or paraglider ;

(*e*) Regulation 8.8.3.1, a person may operate a hang-glider to 500 feet vertically below cloud—

(*i*) up to a maximum altitude of 19,500 feet above MSL in class G airspace ; and

(*ii*) up to a maximum altitude of 19,500 feet above MSL in Class E airspace, other than transponder-mandatory airspace ;

(*f*) Regulation 8.8.1.6, a person may operate a hang-glider below 500 feet AGL for the purpose of ridge soaring: Provided such hang-glider is flown in a manner that does not endanger persons or property on the surface ;

(*g*) Part 14, the pilot in-command of a hang-glider may use any suitable area to launch the hang-glider : Provided permission has been obtained from the owner of the site or the local authority having jurisdiction ; and Provided furthermore that in the case of flight training or tandem operations, only launch sites approved by the Director-General or by the organisation designated for the purpose in terms of Part 11.12, as the case may be, shall be used.

(2) Each pilot and passenger of a hang-glider shall wear a serviceable, rigid, protective helmet of a type approved by the Director-General or by the organisation designated for the purpose in terms of Part 11.12.

(3) In addition to the restrictions imposed by Part 8.8, no hang-glider operation shall be conducted—

(*a*) over a built-up area ; or

(*b*) higher than 19,500 feet above MSL.

(4)(*a*) On every winch, used for the launching of hang-gliders, a means shall be provided for the severing of the launching cable.

(*b*) The means referred to in paragraph (*a*) shall be subject to the approval of the Director-General or the organisation, approved for the purpose in terms of Part 11.12, as the case may be, and shall be so positioned that it can be easily and readily operated by the winch operator.

(5)(*a*) No person may operate a hang-glider with a passenger, unless that person holds a valid tandem rating.

(*b*) Tandem operations shall be limited to two persons, including the pilot.

(*c*) The PIC shall carry a tandem-rated reserve parachute during tandem operations.

(6)(*a*) No person may operate a hang-glider in an aero-tow operation unless such person is the holder of an appropriately endorsed licensed.

(*b*) The requirements for the issue of an aero-tow endorsement are those prescribed in Part 2.

Operation of line-controlled kites.

11.13.6.10. Line-controlled kites are exempted from these regulations—

(1) except from Part 8.8 ; and

(2) provided that no line-controlled kite shall be flown—

(*a*) higher than 150 feet above the surface ;

(*b*) from or above a public road ; or

(*c*) on the approaches to any aerodrome licensed or approved in terms of Part 14 of these regulations, unless with the prior approval of the Director-General and on conditions determined by him or her.

Operation of Model Aircraft.

11.13.6.11. Model aircraft are exempted from these regulations—

(1) except from Part 8.8 ; and

(2) provided that no model aircraft shall be flown—

(*a*) higher than 150 feet above the surface ; or (*b*) from or above a public road, unless with the prior approval of the Director-General and on conditions determined by him or her; or in airspace specifically approved for the purpose by the Director-General and on conditions set by him or her for the use of such airspace.

11.13.7. OPERATION OF PARACHUTES AND DROP ZONES

11.13.7.1. GENERAL

Applicability.

11.13.7.2.—(1) This Part applies to the operation of parachutes.

(2) This Part does not apply to—

(*a*) persons making emergency descents ; or

(*b*) persons making base jumps.

Persons making parachute descent.

11.13.7.3.—(1) Any person making a parachute descent shall—

(*a*) be a bona fide member of an aviation recreation organisation designated by the Director or organisation designated for the purpose as the case may be in terms of Part 11.12 ;

(*b*) be authorised by such approved aviation recreation organisation to make such parachute descent ;

(*c*) comply with the privileges and limitations of the authorisation referred to in paragraph (*b*) ;

(*d*) comply with the standards and procedures determined by such approved aviation recreation organisation ;

(*e*) comply with the currency requirements determined by such approved aviation recreation organisation.

(2) Notwithstanding anything in this part, no parachuting activities shall be undertaken in conflict with the applicable the aviation recreation organisation's approved manual of procedures.

Alcohol and drugs.

11.13.7.4. No person shall make a parachute descent while under the influence of alcohol or a drug having a narcotic effect, to the extent where the safety of such person or other persons is likely to be endangered.

Securing of articles.

11.13.7.5. Any article or object that forms part of the parachutist's acceptable gear or accessories, may be carried on board if secured through acceptable means by the respective person performing the parachute jump.

Hazard.

11.13.7.6. No person shall make a parachute descent if such parachute descent constitutes, or is likely to constitute, a safety hazard to air traffic, persons or property in the air or on the ground, the aircraft concerned or its occupants.

11.13.7.7.—(1) The loadmaster or chief instructor or instructor on duty or jump master on board the aircraft, shall give an instruction to proceed with the parachute descent, after approval has been received from the PIC, or when the aircraft is positioned correctly.

Exit from aircraft.

(2) Each person making a parachute descent shall only exit from the aircraft and commence the parachute descent, on instruction of the loadmaster or chief instructor or instructor on duty or jump master on board the aircraft nominated to do so.

11.13.7.8. Each person making a parachute descent shall activate the main parachute at not less than 2 000 feet AGL, except for—

Minimum parachute opening altitude.

(1) a student parachutist, who shall activate the main parachute at not less than 2,500 feet AGL ;

(2) a person carrying out a tandem parachute descent, who shall activate the main parachute at not less than 4 000 feet AGL ;

(3) a demonstration or display parachutist who may exit and activate their parachute at an altitude less than 2000 feet AGL as per the aviation recreation organisation's approved manual of procedures ; or

(4) a parachutist performing a jump as part of a unusual descent may exit and activate their parachute at an altitude less than 2,000ft AGL as approved by the aviation recreation organisation's national safety and training officer and the body designated for the purpose.

11.13.7.9.—(1) All parachute descents, except emergency and display parachute descents, shall be made within a parachute drop zone approved by the designated body.

Parachute drop zone.

(2) A person may make a parachute descent outside a parachute drop zone, if the descent is authorised by the designated body.

11.13.7.10.—(1) Each person making a parachute descent is required to land on a parachute landing area authorised by the designated body.

Parachute landing area.

(2) Simultaneous parachute and aircraft movements may be conducted at aerodromes if the parachute landing area is located clear of—

(*a*) any movement area in use ;

(*b*) the strip area of any runway in use ;

(*c*) the taxiway minimum separation distances ; and

(*d*) the approach and take-off area of any runway or heliport in use.

11.13.7.11.—(1) A person making a parachute descent shall not land at an unattended aerodrome unless the ground signal, as prescribed in IS 11.13.7.12, is displayed.

Ground signal.

(2) When parachute descents are being performed by night, the ground signal shall be illuminated.

Controlled airspace.

11.13.7.12. Each person making a parachute descent in controlled airspace shall—

(1) have an air traffic control clearance ; and

(2) within a CTA/E, co-ordinate the parachute descent with the appropriate ATS.

Descents into attended aerodromes.

11.13.7.13. Each person making a parachute descent onto an attended aerodrome shall have prior approval from the owner or operator of the aerodrome.

Descents into unattended aerodromes.

11.13.7.14. Each person making a parachute descent onto an aerodrome where no ATS is provided, shall—

(1) have prior approval from the owner or operator of the aerodrome ;

(2) observe other aerodrome traffic operating within the parachute descent zone for the purpose of avoiding collision ;

(3) conform with or avoid the pattern of traffic formed by other aircraft operating within the parachute descent zone at the aerodrome ; and

(4) land within the parachute landing area.

Descents within restricted areas.

11.13.7.15. A person shall not make a parachute descent within the restricted area of an aerodrome unless he or she has obtained the authorisation referred to in Part 8.8.1.21.

Visibility and clearance from cloud.

11.13.7.16. No person shall make a parachute descent above or though cloud if the visibility is less than the visibility and distance from cloud as prescribed in IS 11.13.6.12 unless—

(1) performed in accordance with the aviation recreation organisation's approved manual of procedures ; and

(2) has the prior approval from the Chief Instructor responsible at a particular drop zone.

Descent from unpressurised aircraft.

11.13.7.17. Each person making a parachute descent from an unpressurised aircraft shall—

(1) if between an altitude of FL120 and FL170 for longer than 30 minutes continuously, use supplementary oxygen ;

(2) if between an altitude of FL150 and FL180 for longer than 15 minutes continuously, use supplementary oxygen until immediately prior to exiting the aircraft and has received instruction on the use of oxygen equipment and the effects of Hypoxia ; and

(*c*) if between an altitude of FL180 or higher for more than 10 minutes continuously, use supplementary oxygen until immediately prior to exiting the aircraft.

11.13.7.18. Each person making a parachute descent from a pressurised aircraft up to FL200 shall use supplementary oxygen during the period from immediately prior to decompression to immediately prior to exiting the aircraft. Descent from pressurised aircraft.

11.13.7.18.—(1) Each person making a parachute descent from above FL200 shall comply with the standards, procedures and training requirements determined by the applicable aviation recreation organisation's approved manual of procedures. Descent from above FL200.

(2) No person shall make a parachute descent from above FL200 unless he or she has the prior written approval of the designated body.

(3) Each person making a parachute descent from above FL200 shall, in addition to sub-regulation (1) above and subpart 11.13.7.18, use individual supplementary oxygen during the dispatch and descent.

11.13.7.19. Notwithstanding anything contained in regulation 7.9.1.20 parachutists shall not be required to occupy a seat or berth with a safety belt or harness as the case may be unless such a person is a passenger who does not intend to perform a parachute or tandem descent. Seats, safety belts and harnesses.

11.13.7.20. No NTCA aircraft may be used for parachute drop operations unless— NTCA aircraft used for parachute drop operations.

(1) such aircraft has been considered and found as suitable for the purpose by the applicable aviation recreation organisation and the designated body ; and

(2) such aircraft is issued with a valid authority to fly.

11.13.7.20. Any pilot performing a flight for the purposes of a parachute drop shall— Pilots performing flights for purposes of parachute operations.

(1) be the holder of a valid pilot licence issued in terms of Part 2.3 or Part 2 as the case may be ;

(2) have no less than 100 hours as PIC ;

(3) have received an appropriate briefing on the intended parachute drop operations in accordance with the applicable the aviation recreation organisation's approved manual of procedures ; and

(4) have the briefing in paragraph (3) above entered and signed in the pilots logbook.

11.13.8. PARACHUTE EQUIPMENT

Main parachute.

(1) Each person or tandem pair making a parachute descent shall be equipped with a main parachute which complies with the requirements prescribed by the applicable aviation recreation organisation's approved manual of procedures.

Reserve parachute.

(2) Each person or tandem pair making a parachute descent shall be equipped with a reserve parachute assembly which—

(*a*) complies with the requirements prescribed by the applicable aviation recreation organisation's approved manual of procedures ;

(*b*) has been inspected, re-packed and signed-off within the previous six months by a parachute technician authorised by the applicable aviation recreation organisation's approved manual of procedures ;

(*c*) where necessary, has been repaired in accordance with—

(*i*) the standards of such designated body or institution ; and

(*ii*) the instructions of the manufacturer.

Night descent.

(3) Each person making a parachute descent by night shall be equipped with an illuminated altimeter.

Water descent.

(4)(*a*) Each person making a parachute descent into water shall wear a serviceable, flotation device capable of supporting the person and equipment.

(*b*) Each person or group of persons making a parachute descent shall ensure that there is a rescue tender stationed at the parachute landing area to retrieve such persons.

(*c*) Each person making a parachute descent into water shall be briefed on the procedures for water jump.

Altimeter.

(5) Each student parachutist or solo jumper making a free-fall descent of more than 15 seconds shall—

(1) be equipped with, and use, a serviceable altimeter of a type suitable for parachuting ; and

(2) prior to take-off, zero the altimeter to the parachute landing area height.

Automatic activation devices.

(6) Each student parachutist or tandem master making a parachute descent, and every person making a parachute descent from above FL200, shall, in addition to being equipped with a reserve parachute, be equipped with an automatic activation device on the reserve parachute, which has been—

(*a*) certified as compatible with the reserve parachute assembly on the parachute assembly packing-record by a parachute technician authorised by the designated body ;

(*b*) calibrated in accordance with the manufacturer's operating instructions ; and

(*c*) set to operate the reserve parachute at a minimum altitude of—

(*i*) for an individual parachute descent, 1,000 feet AGL or such lower altitude as predetermined and set within the automatic activation device by the manufacturer of such device for the category of use ; and

(*ii*) for a tandem parachute descent, 2 000 feet AGL or such lower altitude as predetermined and set within the automatic activation device by the manufacturer of such device for use on tandem descents ;

(*d*) inspected by the parachute technician in accordance with the manufacturer's Instructions.

Helmets.

(7) Each student parachutist making a parachute descent shall wear a serviceable, rigid, protective helmet of a type authorised by the applicable aviation recreation organisation's approved manual of procedures.

Parachute descent near water.

(8) Each student parachutist making a parachute descent within one nautical mile of a coastline, harbour, lake or major river shall wear a serviceable flotation device capable of supporting the person and equipment.

Tandem harness.

(9) Each tandem rider making a tandem descent shall wear a harness which is—

(*a*) authorised by the applicable aviation recreation organisation's manual of procedures ; and

(*b*) properly secured to the matching tandem master harness approved by the applicable aviation recreation organisation's manual of procedures.

11.13.9. PARACHUTE MAINTENANCE

Parachute Technician (Rigger).

(1) Each parachute technician shall—

(*a*) be a current bona fide member of the holder of an aviation recreation organization approval issued in terms of Part 11.12 ;

(*b*) be at least 18 years old ;

(*c*) be authorised as a parachute technician by the applicable aviation recreation organisation ;

(*d*) comply with the currency requirements determined by such aviation recreation organisation ;

(*e*) comply with the privileges and limitations of his or her authorisation ; and

(*f*) comply with the operational standards and procedures determined by the applicable aviation recreation organisation.

Safety directives.

(2) A person shall not make a parachute descent unless the parachute assembly complies with—

(*a*) any applicable safety directive issued by the aviation recreation organisation or the designated body ; and

(*b*) all mandatory modifications or instructions issued by the manufacturer.

Parachute Serviceability.

(3)(*a*) Any person who finds a parachute assembly to be unserviceable or not airworthy shall have the assembly—

(*i*) re-inspected and returned to a serviceable and airworthy state ; or

(*ii*) withdrawn from service.

(*b*) Each owner of a parachute assembly shall ensure that it is in a serviceable and airworthy condition before use.

Modification and repair.

(4) A person shall not make a parachute descent with an emergency or reserve parachute, or harness and container system, which has been modified or repaired, in a manner that may affect the airworthiness of the parachute assembly, unless such emergency or reserve parachute has been re-inspected and re-assessed by a parachute technician authorised by the applicable aviation recreation organisation.

Parachute assemblies.

(5)(*a*) Subject to the provisions of sub-regulations (2) and (3), no person shall make a parachute descent unless he or she has checked the state of serviceability of the parachute assembly by—

(*i*) reference to the assembly packing record with the equipment ;

(*ii*) a comprehensive external check ; and

(*iii*) checking the correct setting of the applicable equipment.

(*b*) A student parachutist shall not make a parachute descent unless his or her parachute assembly has been checked in accordance with sub-regulation (*a*) by a person, authorised to supervise the descent by the applicable the aviation recreation organisation's approved manual of procedures.

Parachute records.

(6)(*a*) Each owner of an emergency or reserve parachute assembly, shall maintain a permanent record of the assembly in—

(*i*) a logbook ; or

(*ii*) a separable log page, approved by the applicable aviation recreation organisation.

(*b*) The owner referred to in sub-regulation (*a*) shall make the record available for inspection when required by an authorised officer, inspector or authorised person.

Operation of ex-military jet aircraft.

11.13.10.—(1) Further to the provisions of regulation 8.6.2.13, an ex-military jet aircraft shall carry sufficient fuel—

(*a*) to divert from its destination aerodrome to an alternate aerodrome that is at least 100 km distant from the destination aerodrome ; and

(*b*) to allow for at least 10 minutes of flight at cruise-power settings when arriving over the alternate aerodrome referred to in sub-regulation (*a*).

(2) (*a*) Only if the Director-General on the authority to fly has approved the carriage of passengers may passengers be carried in an ex-military jet aircraft.

(*b*) Where applicable, the owner of an ex-military jet aircraft shall ensure that the medical and physical condition of the passenger complies with the conditions prescribed by the manufacturer of the ejection seat of the aircraft.

(*c*) It is the responsibility of the owner of an ex-military jet aircraft to provide the passenger with suitable and serviceable flying equipment, protection gear and clothing.

(3) The owner of an ex-military jet aircraft shall ensure that the passenger is thoroughly briefed on—

(*a*) all the dangers associated with the flying in an ex-military jet aircraft, including the possible injuries following ejection ; and

(*b*) actions during flight :

(*i*) the operation of switches and handles, if applicable ;

(*ii*) the actions and execution of commands during emergency situations ;

(*iii*) the actions should the PIC become incapacitated during flight ; and

(iv) any other information as seen fit by the owner or the PIC.

(4) MEL

(*a*) *Oxygen Systems*

Oxygen system shall be fully serviceable, unless specifically exempted, whether or not it is intended to fly the aircraft above FL 100.

(*b*) *Aircraft Pressurisation*

Aircraft pressurisation systems shall be fully serviceable, unless specifically exempted, irrespective of the altitudes it is intended that the aircraft be flown.

(*c*) *Ejection Seats*

Where ejection seats are an integral part of the aircrew escape system, as specified in the relevant Flight Manual or Aircrew Notes, they shall be fully serviceable for all flights unless specifically exempted, and all occupants shall have been suitably instructed in their use.

(*d*) *Flying Clothing and Equipment*

(*i*) Certain items of flying clothing and personal equipment are an integral part of the aircraft safety equipment, such as life-saving jackets with dinghy connections or personal equipment connectors with oxygen connections. Where the appropriate clothing, equipment or systems are required for flight, these additional items shall be made available and be fully serviceable.

(*ii*) Unless specifically exempted, all occupants of an ex-military jet or turbo-prop aircraft shall wear protective helmets, equipped with suitable visors and facilitating communication.

(*iii*) Aircraft that are to be operated over large water masses beyond gliding distance from shore shall be equipped with suitable survival equipment, and the occupants shall wear suitable survival clothing and equipment.

(*e*) *Emergency and Backup Systems*

Systems under this heading are invariably an integral part of the aircraft build standard and will have been installed with certain emergencies in mind (i.e. emergency undercarriage lowering, or hood opening or jettison). All such systems shall be serviceable for flight, unless specifically exempted.

(*f*) *Instrumentation for Flight under IFR and Standby Instrumentation*

Where permission has been granted to operate the aircraft in IMC, all instrumentation and equipment normally required for operation in IMC according to IFR shall have been fitted and be serviceable in accordance with the provisions of Part 8 of the Regulations.

(*g*) *Weaponry*

(*i*) Where weaponry are an integral part of the aircraft, such weaponry shall be permanently de-activated, or be removed and replaced by ballast to ensure that the correct mass and centre of gravity of the aircraft is maintained.

(*ii*) The carriage of external weaponry is prohibited.

(*h*) *External Equipment*

Where aircraft are capable of carrying external fuel tanks, whether jettisonable or not, such fuel tanks may be used: Provided that all systems applicable to the fuel tanks are serviceable. The pilot must also be fully qualified in the handling of the aircraft with and without the external fuel tanks (including asymmetric flight) and conversant with the jettison restrictions, limits and implications.

11.13.11.—(1) When a non-type certificated aircraft, classified in the paragraphs (*a*) to (*g*) below— Display Authorization.

(*a*) Aeroplanes, including microlight aeroplanes ;

(*b*) Helicopters ;

(*c*) Gyroplanes and gyrogliders ;

(*d*) Gliders, including self-launching gliders and touring gliders ;

(*e*) Manned captive and manned free balloons ;

(*f*) Airships ;

(*g*) Unmanned aerial vehicle is to participate in a public flying demonstration, the PIC shall be the holder of an appropriate Display Authorization.

(2) The Display Authorization may be issued by the Director-General or by an organization designated for the purpose in terms of Part 11.12, as the case may be, in writing if he, she or it is satisfied that—

(*a*) the pilot has the required experience ; and

(*b*) the proposed display sequence can be executed safely with the particular aircraft.

(3) The Display Authority shall be issued on the prescribed form, and shall detail the aircraft to be used, its configuration, the sequence to be flown, and any other condition that may be imposed by the Director-General or by the organisation designated for the purpose in terms of Part 11.12, as the case may be, at his, her or its discretion in the interest of flight and public safety.

(4) The following information shall be submitted to the Director-General or the organization designated for the purpose in terms of Part 11.12, as the case may be, when applying for a Display Authorization :

(*a*) a summary of the pilot's total flying experience and details of experience on the type of aircraft to be flown in the display ;

(*b*) a detailed list of previous air display experience, to include events, dates, duration, aircraft types, and sequences flown ;

(*c*) the details of the sequence for which Display Authorization is sought, including :

(*i*) good weather sequence ; and

(*ii*) bad weather sequence, where the weather conditions, such as cloud ceiling, impose a restriction on the good weather display sequence. The sequences shall be submitted in textual and graphical form, with the minimum meteorological conditions for each sequence specified.

(*d*) The specific procedures to be followed for possible emergencies that may arise during the display, including the listing of diversion aerodromes.

(*e*) Details of the aircraft in the configuration to be used in the display, including take-off mass, take-off fuel and landing fuel.

(5) The application shall be made in the form prescribed in IS11.13.11.

(6) The application shall be accompanied by the appropriate fee prescribed in NCAA Fees schedule.

11.13.12. MAINTENANCE

(1)(*a*) No owner, operator or PIC of a non-type certificated aircraft, classified in paragraphs (*i*) to (*vii*) below—

(*i*) Aeroplanes, including microlight aeroplanes ;

(*ii*) Helicopters ;

(*iii*) Gyroplanes and gyrogliders ;

(*iv*) Gliders, including self-launching gliders and touring gliders ;

(*v*) Manned captive and manned free balloons ;

(*vi*) Airships ;

(*vii*) Unmanned aerial vehicle ;

(*viii*) Hang-gliders, including powered hang-gliders ;

(*ix*) Paragliders, including powered paragliders and paratrikes ;

(*xi*) Parachutes ;

(*xii*) Model aircraft ;

(*xiii*) Rockets

shall operate the aircraft unless such aircraft is maintained and released to service in accordance with the provisions of Part 8.

(*b*) No owner, operator or PIC of a non-type certificated aircraft, classified in paragraphs (*viii*) to (*xiii*) in regulation 11.13.12(1)(*a*) shall operate the aircraft unless such aircraft has been properly maintained and is in an airworthy condition.

Maintenance and control manual.

(2) Where an owner or operator is required in terms of Part 9 to maintain an operations manual, the latter shall include a maintenance control manual in the format as prescribed in IS.9.4.1.4.

NIGERIA CIVIL AVIATION REGULATIONS

PART 11 — IMPLEMENTING STANDARDS

For ease of reference the number assigned to each implementing standard corresponds to its associated regulation. For example IS : 1.2.1.8 *would reflect a standard required in subsection* 1.2.1.8.

IS 11.12.2.1. MANUAL OF PROCEDURE

Information to be contained in manual of procedure.

1. The information referred to in Nig. CARs 11.12.2.1(1)(*b*), which must be contained in the manual of procedure of the applicant, must include the following :

(1) A statement signed by the accountable manager on behalf of the applicant's organisation confirming that the manual of procedure and any included manuals—

(*a*) define the organisation and demonstrate its means and methods for ensuring ongoing compliance with Part 11 ; and

(*b*) will be complied with at all times.

(2) The titles and names of the personnel required by Nig. CARs 11.12.2.3.

(3) The duties and responsibilities of the personnel specified in Nig. CARs 11.12.2.3 including matters for which they have responsibility to deal directly with the Director-General on behalf of the organisation.

(4) An organisation chart showing lines of responsibility of the personnel specified in Nig CARs 11.12.2.3 and extending to each location listed under sub-paragraph (5).

(5) Details of those locations where members or personnel of the organisation are to exercise functions or powers delegated by the Director-General.

(6) A summary of the resources at and the scope of activity to be conducted at each location listed under sub-paragraph (5).

(7) Details of the organisation's procedure for recording which of its members and personnel hold authorisations granted by the organisation or delegations of the Director-General's functions or powers, or both, including the extent and scope of those authorisations and delegations.

(8) Details of the procedures required by—

(*a*) Nig. CARs 11.12.2.3 regarding the competence of personnel ;

(*b*) Nig. CARs Part 11.12.2.2 regarding quality assurance of the organisation.

(9) Procedures to control, amend and distribute the manual of procedure.

IS.11.12.2.2. Quality Assurance System

1.—(1) The quality assurance system referred to in Nig. CARs 11.12.2.2(2), must include—

(*a*) a clear definition of the level of quality the organisation intends to achieve ;

(*b*) a procedure that sets out the level and frequency of the internal reviews ;

(*c*) a procedure to record the findings and communicate them to management ;

(*d*) a list of responsible persons ;

(*e*) procedures by which other quality indicators such as facility malfunction reports, incidents, occurrences, complaints and defects are brought into the quality assurance system ;

(*f*) procedures for management analysis and overview ;

(*g*) procedures for rectifying any deficiencies which may be found ; and

(*h*) procedures for documenting the complete review process from the inspection to the satisfactory management review so that this is available to the Director-General during a safety inspection and audit.

(2) Measures must be taken to ensure that the system is understood, implemented and complied with at all levels.

(3) The quality assurance system must be documented in the manual of procedure referred to in Nig CARs 11.12.2.2.

IS 11.13.2.1. Ex-Military Aircraft

Required Training.

1. The additional training, required for conversion onto ex-military aircraft shall include ground as well as flight training.

Training Syllabus.

2.—(1) *Ground Training*

(*a*) Ground training may be done on a self-study or formal-lecture basis, after which the applicant must complete a written examination to prove his or her knowledge of all aircraft systems.

(*b*) The technical examinations shall cover the following aspects :

(*i*) Engine

(*ii*) Fuel system

(*iii*) Oil system

(*iv*) Hydraulic system

(*v*) Electrical system

(*vi*) Pressurization system

(*vii*) Ejection system

(*viii*) Emergency systems

(*c*) The technical examinations must be passed with the following minimum results :

(*i*) Limitations : 80%

(*ii*) Procedures : 80%

(*iii*) Emergency Procedures : 95%

(*d*) The ground course shall include an introduction to the use of the survival equipment. Special attention must be given to the use of the parachute, the dinghy and any medical equipment fitted in the aircraft. It would be beneficial for the trainee to do an introductory parachute course. This will enable the individual to brief any future passenger better on the use of a parachute.

(2) *Flying training*

(*a*) The flying training should only be initiated after the completion of the ground phase. During this phase it will be imperative to take previous experience into account. After completion of this phase, the applicant should be able to handle the aircraft safely during all flying conditions, to the satisfaction of the testing flight instructor and the Director.

(*b*) Aspects to be covered during the flying training phase, to the extent applicable to type, shall include the following :

(*i*) Aircraft familiarization ;

(*ii*) Effect of controls ;

(*iii*) Climbing and descending ;

(*iv*) Stalling at various speeds and configurations ;

(*v*) Medium and steep turning ;

(*vi*) Incipient spinning and spinning, if allowed ;

(*vii*) Acrobatic manoeuvres applicable to the specific type ;

(*viii*) Precautionary landings ;

(*ix*) Forced landings ;

(*x*) Approaches (different speeds and configurations as applicable to type) ;

(*xi*) Landings (different speeds and configurations as applicable to type) ;

(*xii*) Navigation (low, medium and high level) ;

(*xiii*) Introduction to instrument flying.

(*xiv*) Introduction to night flying ;

(*xv*) Handling of emergencies ;

(*xvi*) Engine failures during different stages of flight ;

(*xvii*) Engine fire/overheat during different stages of flight ;

(*xviii*) Hydraulic failure ;

(*xix*) Flap failure ;

(*xx*) Dragchute failure.

Guidelines for the establishment of training criteria.

3.—(1) Guideline used by the Director for the approval of training criteria for an individual :

Candidate has less than 300 hours total flying time.	Minimum of 40 hours instruction on type, of which 5 hours could be on a simulator of that type. Minimum of 15 hours with a check pilot who should be a qualified instructor on type. If an instructor is not available, it must be someone who has done the conversion to the instructor's position on type.
Candidate has less than 300 hours total flying time. of which 100 hours are on a jet-engine aircraft.	Minimum of 30 hours instruction on type, of which 5 hours could be on a simulator of that type. Minimum of 10 hours with a check pilot.
Candidate has more than 500 hours total flying time including more than 100 hours as pilot-in-command on a civilian jet aircraft.	Minimum of 10 hours instruction on type. Minimum of 10 hours with a check pilot.
Candidate has a military jet rating obtained as a civilian on a similar aircraft type.	Minimum of 7 hours instruction on type. Minimum of 5 hours with a check pilot.
Candidate has held a military jet licence issued by the air force.	Will be determined by NCAA.

(2) Guideline used by the Director-General for the approval of aerobatic training criteria for an individual :

Candidate has no previous aerobatic experience.	An aerobatic rating and a minimum of 10 hours aerobatic training on the aircraft type.
Candidate has an aerobatic rating issued in terms of Part 61 and has flown more than 6 hours of aerobatics during the preceding twelve months.	Minimum of 4 hours aerobatic training on type.
Candidate has previous aerobatic experience but does not have a civilian acrobatic rating.	An aerobatic rating and a minimum of 6 hours aerobatic training on aircraft type.
Candidate has more than 6 hours aerobatic experience on military jet aircraft during the preceding twelve months and has an aerobatic rating.	Minimum of 2 hour aerobatic training on type.

4.—(1) Information to be supplied to the Director in respect of the candidate when applying for approval of training criteria : Information to be supplied.

(*a*) *Summary of the Pilot Logbook*

The pilot's logbook should be summarised and a copy of the summary page submitted to the Director.

(*b*) *Hours flown per month*

The average number of hours that the applicant flies per month.

(*c*) *Aerobatic Experience*

The total number of hours aerobatic experience and the number of hours aerobatic flying during the preceding twelve months.

(*d*) *Type of Aircraft*

The details of the aircraft type for which the applicant is applying.

(*e*) *Licence Details*

Details of the licences held, including aircraft types, systems, and night or instrument rating.

(2) Information to be supplied to the Director in respect of the person or organization to provide the training when applying for approval of training criteria :

(*a*) *Approved Training Organisation*

The name and certificate number of the Approved Training Organisation.

(*b*) *Flight Instructor*

(*i*) the name and licence number of the flight instructor ; and

(*ii*) the qualification of the flight instructor, including flying experience and type ratings held.

(3) When applying for approval of training criteria the Information to be supplied to the Director shall include—

(*a*) the proposed emergency training procedures ; and

(*b*) the physical and medical requirements for the candidate to operate the aircraft and the limitations imposed.

4. Once the Director has studied the information submitted in terms of sub-paragraphs (3), (4) and (5), and is satisfied that the training will be done in a responsible and safe manner, minimum requirements regarding the training of the particular individual will be supplied in writing by the Director. Prescribed individual training programme.

5. After completion of the conversion onto type, it will be the responsibility of the pilot and the aircraft owner to ensure that the pilot remains current on type. As a guideline, the following should be used : Continuation training.

(1) *Ground training* :

An emergency, handling, limitations and procedural quiz must be completed at least every second month.

(2) *Flying training* :

To remain current, the pilot must—

(*a*) complete at least 12 hours, as pilot-in-command of an ex-military aircraft, over a twelve-months period ; or

(*b*) should this not be the case, or if the pilot has not flown the specific type for a period exceeding three months, the pilot must undergo a check flight with a flight instructor who is current on type ; and

(*c*) undergo at least one check flight on type not later than six months since the previous check flight on type with a flight instructor who is current on type.

Documentation.

6. All documentation generated during the conversion and continuation training shall be filed in the pilot's personal training file, which must be kept at the aircraft owner's office, and which must be made available on request to an authorized officer, an inspector, or an authorized person.

IS 11.13.11. DISPLAY AUTHORISATION

Introduction.

1. When an applicant wishes to participate in public flying demonstrations the applicant should submit the information detailed below to the NCAA. The NCAA will, if it is satisfied that the aircraft can be operated in a safe manner during an air show, issue a Display Authorisation to the applicant.

2. INFORMATION REQUIRED

Flying Experience.

2.1. The applicant should supply a summary of previous flying experience and details of experience on the type of aircraft to be flown during the display.

Air Show Experience.

2.2. The applicant should provide the NCAA with a detailed list of previous air show experience. This should include the dates, duration, aircraft type and sequence flown.

Details of the Sequence.

2.3. The applicant should submit the detail of the sequence to be flown which should include the following :

(*a*) *Good Weather Sequence*

The display sequence to be flown, in textual and graphical form, where the weather conditions do not impose any restriction. The minimum meteorological conditions for this sequence should be specified.

(*b*) *Bad Weather Sequence*

The display to be flown, in textual and graphical form, where the weather conditions such as cloud ceiling imposes a restriction on the display.

The minimum meteorological conditions for this sequence should be specified.

(*c*) *Emergency Procedures*

The specific procedures to be followed for the possible emergency situations that may occur including diversion aerodromes.

2.4. The applicant should supply details of the aircraft configuration including weight, takeoff fuel and landing fuel. Aircraft Configuration.

2.5. The applicant should supply the receipt for the payment of the prescribed fees. Fees.

3. Once the information has been reviewed, a display authorisation may be issued at the discretion of the Director or the organisation, designated for the purpose in terms of Part 11.13.11, as the case may be. The display authorisation details the sequence to be flown and any other conditions that may be imposed. Display Authorisation.

IS 11.13.7.12. OPERATION OF PARACHUTES

List of technical standards

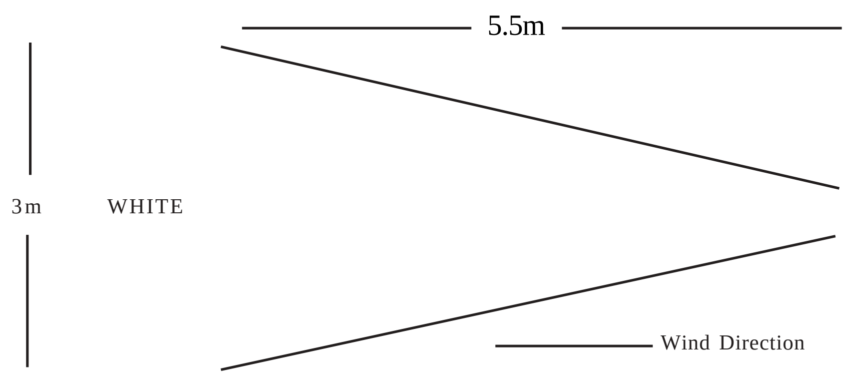
GROUND SIGNAL

1. Ground signal

VISIBILITY AND CLEARANCE FROM CLOUD

1. Ground signal

The ground signal for an unattended aerodrome is the following :



VISIBILITY AND CLEARANCE FROM CLOUD

1. Visibility and Clearance from Cloud.

The visibility and clearance requirments are the following :

Airspace designation	*Visibility*	*Distance fronm clouds*
Class A Class C, D and E	Not Permitted 8 km	Not Permitted Horizontal.........500 m Vertical ....500 ft
Class G Above 3 000 ft above MSL or 1 000 ft above terrain whichever is higher.	8 km	Horizontal.........500 m Vertical ....500 ft
At or below 3 000 ft above MSL or 1 000 ft above terrain whichever is higher	5 km	Clear of clouds and in sight of the surface

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NIGERIA CIVIL AVIATION REGULATIONS

PART 12—AERODROME REGULATIONS

INTRODUCTION

Part 12 provides for the certification of Aerodromes and Heliports and the issuance of operating certificate.

Part 12 is presented in 13 sections dealing with Aerodrome Certification, Aerodrome Manual, Aerodrome Design Requirements, Obligations of Aerodrome Operator, Operation of a Heliport, Heliport Certification, Heliport Manual, Heliport Design Requirements and Obligations of a Heliport Operator.

These Regulations incorporate the Standard and Recommended Practices (SARPs) in Annex 14 to the Chicago Convention as well as the provisions of the Aerodrome Standards Manual (ASM).

B 2044

NIGERIA CIVIL AVIATION REGULATIONS

PART 12—AERODROME REGULATIONS

ARRANGEMENT OF CONTENT

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12.13.5. Heliport Operator's Internal System Audit/ Reporting.
12.13.6. Access to the Heliport.
12.13.7. Heliport Inspection.
12.13.8. Obstacle Environment.
12.13.9. Public Protection and Heliport Security.
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12.13.12. Physical Characteristics.
12.13.13. Visual Aids.
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12.13.15. Heliport Emergency Management Systems.
12.13.16. Aeronautical Studies.

IMPLEMENTING STANDARDS (IS)

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3. Particulars of the Aerodrome required to be Reported to the Aeronautical Information Service (AIS).
3.1 General Information.
3.2. General information, including the following :
4. Particulars of the Aerodrome Operating Procedures and Safety Measures.
4.1. Aerodrome Reporting.
4.2. Access to the Aerodrome Movement Area.
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IS 12.11.3.	Information to be Included in Heliport Manual.

NIGERIA CIVIL AVIATION REGULATIONS

PART 12—AERODROME REGULATIONS

12.1. GENERAL

12.1.1. This Part shall apply to : Applicability.

(*i*) civil aerodromes ;

(*ii*) military aerodromes serving civil aircraft operations ; and

(*iii*) those portions of joint-use or shared-use aerodromes under the control of an individual or civil entity and serving civil aircraft operations of any class or category.

12.1.2.1.—(*a*) For the purpose of this Part, the following definitions shall apply : Definitions.

(1) *Aerodrome*—A defined area on land or water including any building, installations and equipment, intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

(2) *Aerodrome Beacon*—Aeronautical beacon used to indicate the location of an aerodrome from the air.

(3) *Aerodrome Certificate*—The certificate to operate an aerodrome issued by the Authority subsequent to the approval of the aerodrome operator's manual.

(4) *Aerodrome Elevation*—The elevation of the highest point of the landing area.

(5) *Aerodrome Facilities and Equipment*—Facilities and equipment, inside or outside the boundaries of an aerodrome, that are constructed or installed and maintained for the arrival, departure, and surface movement of aircraft.

(6) *Aerodrome Operator*—The owner or provider of an aerodrome that is certified for operations by the Authority.

(7) *Aerodrome Manual*—The Manual that forms part of the application for an aerodrome certificate pursuant to these regulations, including any amendments thereto acceptance/approval by the Authority.

(8) *Aerodrome Reference Point*—The designated geographical location of an aerodrome.

(9) *Aerodrome Standards Manual*—A document containing the Aerodrome Standards consistent with the provisions of ICAO Annex 14 Volumes I and II pertaining to the planning, operations and maintenance of aerodrome services, facilities and equipment, to be complied with, by the aerodrome operators.

(10) *Aeronautical Study*—A study of an aeronautical problem to identify possible solutions and select a solution that is acceptable without degrading safety.

(11) *Aeroplane*—A power driven heavier-than-air aircraft deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(12) *Aircraft*—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(13) *Aircraft Stand*—A designated area on an apron intended to be used for parking an aircraft.

(14) *Air Taxiway*—A defined path on the surface established to permit the movement of helicopters above it while remaining in ground effect at ground speeds not exceeding 37km/h (20kt).

(15) *Air Transit Route* —A defined path on the surface established to permit the movement of helicopters above it, normally at heights not above 30m (100ft) above ground level and at ground speeds in excess of 37 km/h (20kt).

(16) *Approach Surface*—An inclined plane or a combination of planes sloping upwards from the end of the safety area, centered on a line passing through the centre and through which no obstacle may penetrate.

(17) *Apron*—A defined area on an aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

(18) *Apron Management Service*—A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

(19) *Authority*—Refers to the Nigerian Civil Aviation Authority.

(20) *Aviation Height Clearance (AHC)*—An official permission granted by the Authority to an applicant prior to the commencement of construction or erection of a structure within the Nigerian Airspace.

(21) *Balloon*—A lighter than air aircraft that is not engine driven and that sustains flight through the use of either gas buoyancy or an airborne heater; or an extremely flexible bag that can be inflated with a gas, such as helium, hydrogen, nitrous oxide, oxygen, or air to make it afloat.

(22) *Certified Aerodrome*—An aerodrome whose operator has been granted an aerodrome certificate by the Authority.

(23) *Crane*—A specially made machine with a long arm that is used by workers for lifting and moving heavy objects.

(24) *Elevated Heliport*—An area on a raised structure on land designated for the arrival and departure of helicopters.

(25) *Emergency Operations Centre*— A designated area on the aerodrome used in supporting and coordinating operations at aerodrome emergencies.

(26) *Full-scale Emergency Exercise*—Assembling and utilisation of all the resources that would be available and used in a real emergency.

(27) *Final Approach and Take-off Area* (*FATO*)—A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. And, where the FATO is to be used by performance Class 1 helicopters, it includes the Rejected Take-Off Area .

(28) *Frangible Object*—An object of low mass designed to break, distort, or yield on impact so as to present the minimum hazard to aircraft.

(29) *Ground Effect*—The reaction to the downward airflow through the helicopter rotor striking the ground or water, which enhances the lift forces acting on the helicopter.

(30) *Ground Taxiway*—A defined path on the surface established to permit the movement over the ground of wheeled helicopters under their own power.

(31) *Hangar*—A shelter, specifically, built for housing or repairing aircraft.

(32) *Helicopter*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power driven rotors on substantially vertical axis.

(33) *Helicopter Clearway*—A defined area on the surface beyond the Rejected Take-Off Distance Available (RTODAH) and under the control of the appropriate authority, selected and/or prepared as a suitable area over which a performance Class 1 helicopter may accelerate and achieve a specific height and in which lightweight and frangible objects only are permitted.

(34) *Helideck*—An area located on a floating or fixed structure offshore designated for use by helicopters.

(35) *Heliport*—An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movements of helicopters.

(36) *Heliport Elevation*—The elevation of the highest point of the landing area.

(37) *Heliport Reference Point*—The designated geographical location of a heliport.

(38) *Heliport Safety Area*—On a heliport, a defined area surrounding the FATO which is free of obstacles, other than those required for air navigation purposes, and intended to reduce the risk of damages to helicopters, accidentally diverging from the FATO.

(39) *High Rise structure*—Any building, mast, tower, hills, trees, crane, hangar, etc. (natural or man-made, permanent or temporary) considered to be of prominent height above ground level.

(40) *Inner Horizontal Surface*—A circular surface located in a horizontal plane above the Final Approach and Take-Off area (FATO) and its environs and designated to allow safe visual manoeuvering by helicopters.

(41) *Joint Use Airport*—Any airport jointly used for both civil and military aircraft operations.

(42) *Landing Area*—The part of a movement area intended for the landing or take-off of aircraft.

(43) *Landing Distance Available* (*LDAH*)—The length of the (FATO) plus any additional area declared available and suitable for helicopters to complete the landing manoeuvre from a defined height.

(44) *Manoeuvering Area*—That part of an aerodrome to be used for the take-off, landing, and taxiing of aircraft, excluding aprons.

(45) *Marker*—An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

(46) *Marking*—A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

(47) *Mast*—A tall structure designed to support antennas/aerials for telecommunications and broadcasting; including electricity pylons and poles for wind turbines.

(48) *Movement Area*—That part of an aerodrome to be used for the take-off, landing, and taxiing of aircraft, consisting of the manoeuvering area and the apron.

(49) *Obstacle*—All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft ; or that extend above a defined surface intended to protect aircraft in flight ; or stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

(50) *Obstacle Free Zone* (*OFZ*)—The airspace above the inner approach surface, inner transitional surfaces and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

(51) *Obstacle Limitation Surfaces*—Series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacle in order to permit the intended aircraft operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome.

(52) *On-scene Commander*—Person designated to take charge of the overall emergency operations.

(53) *Rejected Take-off Distance Available* (*RTODAH*)—The length of the FATO declared available and suitable for helicopters operated in performance Class 1 to complete a rejected take-off.

(54) *Runway*—A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

(55) *Runway Strip*—A defined area including the runway and stopway, if provided, intended :

(*a*) to reduce the risk of damage to aircraft running off a runway ; and

(*b*) to protect aircraft flying over it during take-off or landing operations.

(56) *Runway Visual Range* (*RVR*)—The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

(57) *Shoulder*—An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

(58) *Safety Management System*—A system for the management of safety at aerodromes including the organisation structure, responsibilities, procedures, process and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for the control of safety at, and the safe use of the aerodrome.

(59) *Safety Area*—A defined area made up of either a runway or taxiway and the surrounding surfaces that are prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot, or excursion from a runway or the unintentional departure from a taxiway.

(60) *Shared Use Airport*— Any airport owned and operated by the Ministry of Defence, a portion of which is leased to a person or civilian entity for the provision of civil aircraft operations.

(61) *Taxiway Strip*—An area including a taxiway intended to protect an aircraft operating on a taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

(61) *Tower*—A self-supporting mast of massive dimension in terms of base size and height designed to support antennas/aerials for telecommunications and broadcasting.

(62) *Unserviceable Area*—A part of the movement area that is unfit and unavailable for use by aircraft.

(63) *Work Area*—A part of an aerodrome in which maintenance or construction works are in progress.

(64) *Wildlife Hazard*—A potential for a damaging aircraft collision with birds or animals on or near an aerodrome.

Abbreviations.

12.1.2.2.—Abbreviations**.**

1.	ACN	Aircraft Classification Number
2.	AEP	Aerodrome Emergency Plan
3.	AIP	Aerodrome Information Publication
4.	AIS	Aeronautical Information Services
5.	ASDA	Accelerate-Stop Distance Available
6.	ATC	Air Traffic Control
7.	ATS	Air Traffic Services
8.	AT-VASIS	Visual Approach Slope Indicator System
9.	BRS	Baggage Reconciliation System
10.	DAAS	Directorate of Aerodrome and Airspace Standards
11.	ELT	Emergency Locator Transmitter
12.	FATO	Final Approach and Take-Off Area
13.	FIDS	Flight Information Display System
14.	Ft	Feet
15.	HAPI	Helicopter Approach Path Indicator
16.	IBIS	International Birdstrike Information System
17.	ICAO	International Civil Aviation Organization
18.	ILS	Instrument Landing System
19.	IS	Implementing Standards
20.	Km/h	Kilometer per hour
21.	Kt	Knot
22.	LDA	Landing Distance Available
23.	NCAA	Nigerian Civil Aviation Authority
24.	NOTAM	Notice to Airmen
25.	OFZ	Obstacle Free Zone
26.	PAPI	Precision Approach Path Indicator
27.	PCN	Pavement Classification Number
28.	R/T	Radio Telephony
29.	RTOA	Rejected Take-Off Area
30.	RTODAH	Rejected Take-Off Distance Available (Heliport)
31.	RVR	Runway Visual Range
32.	SMGCS	Surface Movement Guidance and Control Systems
33.	TLOF	Touchdown and Lift-Off Area
34.	TODA	Take-Off Distance Available
35.	TORA	Take-Off Run Available
36.	T-VASIS	Visual Approach Slope Indicator System
37.	VOR	Very High Frequency Omni-directional Radio Range
39.	VAGS	Visual Alignment Guidance System
40.	ASM	Aerodrome Standards Manual

12.1.3.—(*a*) The Minister may approve the establishment and development of aerodromes anywhere in Nigeria ; Establishment of Aerodromes in Nigeria.

(*b*) Roads, approaches, apparatus, equipment, buildings and other accommodations in connection to such aerodromes shall be maintained by the owners in conformity with these regulations and any other requirement as may be prescribed by the Authority from time to time**.**

12.1.4.1.—(*a*) No person or corporate entity shall commence construction or reconstruction of an aerodrome without approval of the Authority. Design/ Operation of Aerodromes.

(*b*) Pursuant to Regulation 12.1.4.1(*a*), an applicant shall submit to the Authority the following for evaluation :

(*i*) aerodrome layout plan, pavements profile, electrical systems, control tower, terminal and other operational buildings ;

(*ii*) meteorological data from an approved meteorological organisation and detailed wind rose analysis for the runway orientation ;

(*iii*) pavement markings, lights and signs plans ;

(*iv*) proof of pavement bearing strength determination as specified in 6.2.6.2 of the Aerodrome Standards Manual ;

(*c*) No person shall operate an aerodrome in Nigeria specified in section 12.3.1 for take-off and landing of aeroplanes unless such person is a holder of an Aerodrome Certificate granted by the Authority under these Regulations.

(*d*) The provision of 12.1.4.1(*c*) above does not include aerodromes owned by the Federal Government which are designated in the Nigeria Aeronautical Information Publication as airstrip and notified as available for take-off and landing of such aircraft in respect of which the Minister has given permission for the particular to take-off or land in accordance with any conditions subject to which such permission may have been granted shall be subject to safety oversight by the Authority.

(*e*) Operations of airstrips not designated in the Nigeria Aeronautical Information Publication shall be at the users' discretion.

12.1.4.2.—(*a*) Subject to the approval of the Ministry of Defence, a military Aerodrome and shared-use aerodrome may be authorised by the Authority for use by civil aircraft, upon acceptance/approval of a written application by an individual or civil entity intending to use the facility for civil aviation purposes. Restrictions.

(*b*) The approval or authorisation referred to in (*a*) above may be granted under such condition and for such period, which the Authority may determine, if the Authority is satisfied that the provisions of this regulation have been met and the use of such Aerodrome by such operator will not jeopardise aviation safety.

12.1.5.1. The Authority shall restrict or prohibit flights by night from, or at any aerodrome at which adequate facilities for night flights are lacking; or where the terrain or other objects in the vicinity of the aerodrome could cause a hazard to the operation of aeroplanes or helicopters used in night flights.

12.1.5.2. The Authority shall restrict or prohibit operation at an aerodrome either absolutely or subject to any exceptions or conditions that the Authority shall specify, if the restriction is necessary for aviation safety and/or in the public interest.

Prohibitions.

12.1.6.1. Except with the approval of the aerodrome operator, no aircraft operator shall park or abandon used or unused aircraft on the airside of the aerodrome.

12.1.6.2. Except with the approval of the certified aerodrome operator, no person shall :

(*a*) drive a vehicle into restricted areas of the aerodrome, or the terminal building ; or

(*b*) obstruct an entrance to or passage in the terminal building in such a manner as to inconvenience other aerodrome users.

12.1.6.3. No person shall, on a certified aerodrome :

(*a*) obstruct or interfere with the authorised use of the aerodrome ;

(*b*) obstruct any employee of the aerodrome operator acting in the execution of his or her duty in relation to the aerodrome ;

(*c*) throw, leave, or drop anything capable of causing injury to any person or damage to property ;

(*d*) dump any waste matter whatsoever elsewhere other than a place designated and approved for the purpose by the aerodrome operator ;

(*e*) commit any nuisance, disorderly, or indecent act, write, draw or affix any profane, obscene or abusive materials on aerodrome ;

(*f*) spill or release substances capable of causing air, water, or soil pollution.

12.1.6.4. Except with permission of the certified aerodrome operator, no person shall :

(*a*) interfere or tamper with any part of the aerodrome or any equipment associated with the operation of the aerodrome ;

(*b*) gain access through restricted structures ;

(*c*) carry out trade of any level and magnitude including foreign exchange ;

(*d*) advertise in the aerodrome ;

(*e*) handle passengers and baggage, or confront passengers and aerodrome users for unsolicited service.

12.1.6.5. Except with the approval of the aerodrome operator, no person shall supply any fuel to any aircraft except at a place and in a manner approved by the aerodrome operator.

12.1.6.6. The aerodrome operator shall subject any approval granted under this subsection to compliance with such conditions as the aerodrome operator may impose in order to safeguard the safety of persons and property on the aerodrome.

12.1.7.1. OBSTACLE RESTRICTION, REMOVAL AND ALTERATION.

Obstacle Restriction, Removal and Alteration.

12.1.7.1.1. The Authority may regulate or prohibit any structure which by virtue of its height, location or position is considered to constitute a hazard to air navigation.

12.1.7.1.2. Any person who proposes any of the following construction or alteration shall notify the Authority of :

(*a*) Any high-rise construction or alteration above the ground level at its site ;

(*b*) Any construction or alteration which extends above an obstacle limitation surface prescribed in Chapter 8 of the Aerodrome Standards Manual ;

(*c*) Any highway, railroad or other transverse way for mobile objects of which if adjusted upwards 4.8m for roads and highways, 5.4m for railroads or the height of the highest mobile object that would traverse the road will not exceed the standard of paragraph (*b*) of this section ;

(*d*) Any construction or alteration on any of the following :

(1) aerodrome, heliport or landing facility ;

(2) An aerodrome under construction that is subject of a notice or proposal on file with the Authority.

(*e*) Aerodrome operators shall monitor and report to the Authority any erection of high rise man-made structures outside the boundary of their aerodromes to ensure the safety of airspace for aircraft operations.

12.1.7.1.3. AVIATION HEIGHT CLEARANCE

Requirement for Construction/ Erection of High-rise Structure.

12.1.7.1.3.1. No person or organization shall put up a structure (permanent or temporary) within the navigable airspace of Nigeria unless such a person or organization is a holder of Aviation Height Clearance Certificate granted under this Regulation.

Process for construction/ erection of high rise structure.

12.1.7.1.3.2.—(1) Initiation of studies.

The Authority shall conduct an aeronautical study when :

(*a*) Requested by the sponsor of any proposed construction or alteration for which an application is submitted ; or (*b*) The Authority determines a study is necessary ;

(*c*) The initiation serves as the basis for :

(*i*) Evaluating the effect of the construction or alteration on operating procedures ;

(*ii*) Determining the potential hazardous effect of the proposed construction on air navigation ;

(*iii*) Identifying mitigating measures to enhance safe air navigation ;

(*iv*) Charting of new objects.

(2) *Requirements for AHC Certificate.*

A person or organisation proposing the construction of a structure or alterations to existing structure shall make a request in writing to the Authority.

The applicant shall pay the Authority's approved fee.

The application letter shall contain the following information for "Off-Aerodrome" proposal:

(*a*) Owner of the proposed structure.

(*b*) Address of the proposed structure.

(*c*) Geographical Coordinates (WGS 84) of the site.

(*d*) Elevation (above mean sea level) of the site.

(*e*) Proposed height of the structure including antennas or other appurtenances.

The application letter shall contain the following supplemental information for "On-Aerodrome" proposal :

(*a*) Drawing (preferably scaled) showing location of the object in relation to nearest active runways ;

(*b*) Perpendicular distance of the proposed structure to the nearest active runway centerline ;

(*c*) Distance along centerline (actual or extended) from runway end to the perpendicular intercepts point ;

(*d*) Ground elevation at the site of the proposed structure ;

(*e*) Geographical Coordinates (WGS 84) of the site ;

(*f*) Proposed height of the structure including antennas or other appurtenances ;

(*g*) Sketches, drawings, etc showing the type of construction or alteration being proposed.

(3) *Permanent and Temporary Obstructions*

Aerodrome owners and operators shall ensure that all structures whether permanent or temporary in nature are evaluated by the Authority prior to commencement of work.

Listed below are some typical examples of permanent and temporary structures. These lists shall not be construed as all inclusive of such objects that require AHC :

(*a*) *Permanent Construction or Alteration* :

Tower, Mast, Prominent Building, Elevated Signs, Fences, Light Fixtures, Navaid Facilities, National Weather Service Facilities, Power and Cable Lines or Catenaries, Wind Turbine, Chimney, Gas Flare Stacks, Storage Tanks (water or fuel) and similar solid structures.

(*b*) *Temporary Construction or Alteration* :

Construction Equipment, Moored Balloon and Kites, Cranes, Drilling Rigs, Stock Piles, Staging Areas, Trucks and Temporary Lights poles.

(4) *Evaluating Aeronautical Effect*

(*a*) The Authority may conduct an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by the Authority, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies shall include evaluating :

(*i*) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules ;

(*ii*) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules ;

(*iii*) The impact on existing and planned public use aerodromes ;

(*iv*) Aerodrome traffic capacity of existing public use aerodromes and public use aerodrome development plans received before the issuance of the final determination ;

(*v*) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures ;

(*vi*) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, weather observation facilities and other surveillance systems ;

(*vii*) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.

NOTE 1 : The Authority encourages the use of antenna farms and the single structure–multiple antenna concepts for telecommunication towers/ masts whenever possible.

NOTE 2 : In considering proposals for establishing antenna farm areas, the Authority considers as far as possible, the revision of aeronautical procedures and operations to accommodate antenna structures that will fulfill broadcasting requirements.

(5) *Site Inspection*

The proposed site(s) shall be assessed by the Authority to verify the accuracy of the information submitted by the applicant and for effective aeronautical studies of the structure(s).

(6) *Determinations*.

(*a*) The Authority shall issue a determination stating whether the proposed construction or alteration would be a hazard to air navigation, and will advise the applicant(s) and/or known interested person(s).

(*b*) The Authority shall make determinations based on the aeronautical study findings and will identify the following :

(*i*) The effects on VFR/IFR aeronautical departure/arrival operations, air traffic procedures, minimum flight altitudes, and existing, planned, or proposed aerodromes of which the Authority has received actual notice prior to issuance of a final determination.

(*ii*) The extent of the physical and/or electromagnetic effect on the operation of existing or proposed air navigation facilities, communication aids, or surveillance systems.

Refusal to grant AHC.

12.1.7.1.4. The Authority shall not grant AHC to any structure when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact.

NOTE : When the aeronautical study concludes that temporary structure will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation, all relevant conditional provisions - notice requirements, operational hours, marking and lightings as appropriate - to prevent potential problems shall be put in place.

Grant of AHC to erect Structures.

12.1.7.1.5. The Authority shall issue AHC if the results of aeronautical study carried out indicates that the erection of the structure on the proposed site will not constitute hazard to air navigation.

Dismantling.

12.1.7.1.6. The Authority shall use all legal means of ensuring the removal of any structure which are erected or constructed without compliance with the provisions of these Regulations.

12.1.7.1.7. The holder of an AHC certificate shall : Obligations of AHC Holder.

(*a*) Ensure that the height of the structure does not exceed the height for which AHC has been granted ;

(*b*) Ensure that the structure is appropriately marked and lighted as stipulated in the conditions for granting the AHC ;

(*c*) Ensure that the painting and warning lights to be used on the approved structures conform to appropriate standards for conspicuity that would better serve aviation safety ;

(*d*) Ensure proper records of AHC granted to it and the renewal of the AHC, at least 30 days to the expiry dates.

12.1.7.1.8. Alternate sections of aviation orange (or red) and white paints shall be used as they provide maximum visibility of an obstruction by contrast in colour. Markings and Lights.

The height of the structure shall determine the number of alternate marking sections and number of light levels as stipulated in Chapter 10 the ASM.

12.1.7.1.9. Markers shall be used to highlight structures when it is impractical to make them conspicuous by painting or when additional conspicuity is necessary for aviation safety. Markers.

Markers shall be :

(*i*) displayed in conspicuous positions on or adjacent to the structures so as to retain the general definition of the structure.

(*ii*) distinctly shaped – spherical or cylindrical – so they are not mistaken for items that are used to convey other information and shall be recognisable in clear air from a distance of at least 4000ft (1.22km) and in all directions from which aircraft are likely to approach.

12.1.7.1.10. The structure surfaces shall be repainted when the colour changes noticeably or its effectiveness is reduced by scaling, oxidation, chipping, or layers of contamination. Maintenance.

Markers shall be replaced when faded or otherwise deteriorated and obstruction warning lights shall be closely monitored by visual or automatic means to ensure that burnt lights are replaced without delay.

12.1.7.1.11. The AHC shall remain in force for a period of one (1) year when it shall be due for renewal unless suspended or cancelled by the Authority. Period of Validity and Renewal.

12.1.7.1.12. The Authority shall carry out surveillance inspection of existing structures within the Nigerian Airspace – on aerodrome or off aerodrome - to ascertain the compliance level of the structures with safety measures in terms of painting, markers, lightings and approved heights for the structures. Surveillance Inspection of Structures in Nigerian Airspace.

Suspension or Cancellation.

12.1.7.1.13. The Authority shall suspend or cancel aviation height clearance certificate if there is a variation in the approved height of structure without notification to the Authority or the holder of the AHC fails to carry out appropriate maintenance regarding the painting, markers and warning lights on the structure.

The holder of a suspended or cancelled AHC shall ensure that the anomalies that caused the suspension or cancellation are addressed within 21-days or have the structure dismantled.

Change of ownership.

12.1.7.1.14. The holder of AHC shall notify the Authority whenever there is a change in ownership of a structure.

12.1.7.2. An aeronautical study shall be conducted by the Authority of any construction or alteration for which a notice is submitted under paragraphs (*a*) — (*d*) of section 12.1.7.1.2 to determine the effect of the proposal upon the operation of air navigation facilities and the safe and efficient use of the navigable airspace.

12.1.7.3. The study may include the physical and electromagnetic radiation effect the proposal may have on the operation of air navigation facility.

Register of Aerodromes and Aerodromes Certificates.

12.1.8.1.—(*a*) The Authority shall maintain a register of all aerodrome certificates issued under these Regulations.

(*b*) The Authority shall also maintain a register of all aerodromes situate in Nigeria whether certified or not.

12.1.8.2. The registers shall contain the following particulars—

(*a*) the full name, and if any, the trade name of the holder of the certificate ;

(*b*) the postal address of the holder of the certificate or owner of the aerodrome ;

(*c*) the name and the location of the aerodrome ;

(*d*) the number of the certificate issued (for certified aerodrome) ;

(*e*) file reference number of the initial and each subsequent safety inspection record and audit report in respect of each aerodrome certified ;

(*f*) the nationality of the holder of the certificate or owner of the aerodrome.

12.1.8.3. The particulars referred to in section 12.1.8.2 will be recorded in the register within seven (7) days from the date on which the certificate was issued by the Authority.

12.1.8.4. The register shall be kept in a safe place at the office of the Director General.

12.1.8.5. Persons who intend to access the register for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

Exemptions.

12.2.—(*a*) The Authority may exempt, in writing, an aerodrome operator from complying with specific provisions of these Regulations ;

(*b*) The exemption process shall be in accordance with Part 1.4 ;

(*c*) An exemption is subject to the aerodrome operator complying with the conditions and procedures specified by the Authority in the Aerodrome Certificate as being necessary in the interest of safety ;

(*d*) When an aerodrome does not meet the requirement of a standard or practice specified in the Aerodrome Standards Manual, these Regulations and other relevant advisory documents, the Authority may determine, after evaluating the aeronautical studies conducted by the Aerodrome Operator, the conditions and procedures that are necessary to ensure a level of safety equivalent to that established by the relevant Regulations ;

(*e*) Deviation from these Regulations and the conditions and procedures referred to in section 12.3.11. shall be set out in an endorsement on the Aerodrome Certificate and published in the AIP.

Aerodrome Certification.

12.3. The five phases for aerodrome certificate approval are :

(*i*) expression of interest by an intending applicant for an aerodrome certificate ;

(*ii*) assessment of the formal application including evaluation of Aerodrome Manual ;

(*iii*) assessment of the aerodrome facilities and equipment ;

(*iv*) issuance or refusal of an aerodrome certificate ; and

(*v*) Publication of the certified status of an aerodrome and the required details in the AIP.

NOTE : Details of the certification process is contained in the advisory circular, NCAA-AC-ARD002, on certification of aerodrome.

Requirement for an Aerodrome Certificate.

12.3.1. All Aerodromes in Nigeria used for international and domestic operations shall be certified in accordance with these Regulations.

(*a*) The operator of an aerodrome designated for public use shall be in possession of an aerodrome certificate.

(*b*) An aerodrome certificate is required if :

(*i*) the maximum take-off mass of the aircraft exceeds 2 730 kg ; or

(*ii*) the aerodrome is designated for night operations.

(*c*) The operator of an aerodrome for which an aerodrome certificate is not required may nevertheless apply for an aerodrome certificate, for which a fee may be charged.

Application for an Aerodrome Certificate.

12.3.2. The applicant shall submit the following to the Authority for acceptance/approval :

(*a*) An application for the issuance of an Aerodrome Certificate made to the Authority in the form and manner prescribed by the Authority. The application shall include :

(*i*) the Aerodrome manual and Statement of Compliance demonstrating that the aerodrome operator's Aerodrome Manual is in compliance with the relevant provisions of the Aerodrome Standards Manual ;

(*ii*) the plans of the Aerodrome as specified in IS 12.4.2(2) including obstacle chart 'A' showing details of obstacles, obstruction marked/lighted ;

(*iii*) security clearance from the Federal Government ;

(*iv*) written approval from the town planning authority ;

(*v*) Environmental Impact Assessment approval from the Ministry of Environment ;

(*vi*) the proof of payment of appropriate fee as prescribed by the Authority ;

(*vii*) adequate insurance cover ;

(*viii*) particulars of non-compliance with, or deviations from the standards prescribed in Nig. CARs Part 12 and/or Aerodrome Standards Manual (ASM).

Grant of an Aerodrome Certificate.

12.3.3.—(*a*) Subject to the provisions in sections 12.3.3 (*b*) and 12.3.4, the Authority may approve the application and accept/approve the aerodrome manual submitted under section 12.3.2 and grant an aerodrome certificate to the applicant.

(*b*) Before granting an aerodrome certificate, the Authority shall be satisfied that :

(*i*) the applicant and his or her staff have the necessary competence and experience to operate and maintain the aerodrome properly ;

(*ii*) the aerodrome manual prepared for the applicant's aerodrome accurately describes the facilities, services and equipment at the aerodrome ;

(*iii*) the aerodrome facilities, services and equipment mentioned in (*ii*) conforms with the standards specified in the Aerodrome Standards Manual and these Regulations ;

(*iv*) the aerodrome operating procedures make satisfactory provision for the safety of aircraft ; and (*v*) an acceptable safety management system is in place at the aerodrome.

12.3.4. If the Authority refuses to grant an Aerodrome Certificate to an applicant, the Authority shall give the applicant a written notice stating the reasons for the refusal, not later than 14 days after the date of refusal.

Refusal to grant an Aerodrome Certificate.

12.3.5. An Aerodrome Certificate remains in force for a period of three (3) years, unless it is suspended or revoked by the Authority.

Duration of an Aerodrome Certificate.

12.3.6. An aerodrome operator shall ensure that renewal of his or her Aerodrome Certificate is commenced not less than 90 days to the date of expiration of his or her certificate.

Renewal of an Aerodrome Certificate.

12.3.7.—(*a*) The Authority shall, by written notice to the holder of an aerodrome certificate ; suspend an aerodrome certificate if :

Suspension of an Aerodrome Certificate by the Authority.

(1) a condition to which the certificate is subject has been breached ; or

(2) the aerodrome facilities, operations or maintenance are not of the standard required in the interests of the safety of air navigation ; or

(3) the aerodrome operator's safety management system is found to be inadequate ;

(4) it is in the interest of operational safety ;

(5) all other means for timely correction of the unsafe condition or ensuring safe aircraft operations have not yielded the required results ;

(6) the technical proficiency or qualifications of the aerodrome operator to perform the duties to meet the critical safety requirements in accordance with the regulations are found inadequate ;

(7) the operator resists or is unwilling to take action to correct or mitigate the condition affecting aviation safety ; or

(8) the operator willfully fails to perform an already agreed upon corrective action and suspension of the certificate is the last resort to avoid unsafe operations in the aerodrome movement area ;

(*b*) Before suspending an Aerodrome Certificate, the Authority shall give to the holder a “show cause notice” that :

(1) sets out the facts and circumstances that, in the opinion of the Authority, would justify the suspension ; and

(2) invite the holder to show cause, in writing within 14 days after the date of the notice, why the certificate should not be suspended.

(*c*) The Authority shall take into account any written submission that the holder makes to the Authority within the time allowed.

Revocation of an Aerodrome Certificate by the Authority.

12.3.8.—(*a*) The Authority shall, by written notice given to the holder of an aerodrome certificate, revoke an aerodrome certificate if :

(1) the aerodrome operator is incapable or unwilling to carry out corrective action or has committed or repeated serious violations ;

(2) the aerodrome operator has demonstrated a lack of responsibility, such as deliberate and flagrant acts of non-compliance or falsification of records jeopardizing aviation safety ; or

(3) the aerodrome operator has made it convincingly clear that the continued operation of the aerodrome will be detrimental to the public interest ;

(*b*) Before revoking an Aerodrome Certificate, the Authority shall give to the holder a "show cause notice" that :

(1) sets out the facts and circumstances that, in the opinion of the Authority, would justify the revocation ;

(2) invites the holder to show cause, in writing, within 14 days after the date of the notice, why the certificate should not be revoked ; and

(3) Notwithstanding the provisions of paragraph 12.3.8(*b*)(2), if the Authority finds that immediate revocation is required for the safety of air transportation, the Authority may revoke the Aerodrome Certificate, without stay on the date stipulated by the Authority.

(*c*) The Authority shall take into account any written submission that the holder makes to the Authority within the time allowed.

Transfer of an Aerodrome Certificate.

12.3.9.—(*a*) The Authority may approve the transfer of an Aerodrome Certificate when :

(1) the current holder of the Aerodrome Certificate notifies the Authority in writing, at least 90 days before ceasing to operate the Aerodrome ;

(2) the current holder of the Aerodrome Certificate notifies the Authority in writing, of the name of the transferee ;

(3) the transferee applies to the Authority in writing, within 90 days before the current holder of the Aerodrome Certificate ceases to operate the aerodrome ; and

(4) the requirements set out in section 12.3.3 (*b*) are met by the transferee.

(*b*) If the Authority does not consent to the transfer of an Aerodrome Certificate, it shall notify the transferee in writing, of its reasons not later than 30 days after making that decision.

Voluntary Surrender of an Aerodrome Certificate.

12.3.10.—(*a*) The holder of an Aerodrome Certificate shall give the Authority not less than 30 days written notice of the date on which the certificate is to be surrendered in order that suitable action can be taken.

(*b*) The Authority shall cancel the certificate on the date specified in the notice.

12.3.11.—(*a*) The Authority, when granting the Aerodrome Certificate shall endorse the Conditions for the type and use of the aerodrome and other details in the Aerodrome Certificate ; Endorsement of Conditions of an Aerodrome Certificate.

(*b*) The general and specific conditions to be endorsed on the aerodrome certificate are as contained in the Aerodrome Standards Manual.

12.3.12. Provided that the requirements of subsection 12.3.3(*b*) have been met, the Authority shall amend an Aerodrome Certificate when : Amendment of an Aerodrome Certificate.

(*a*) there is a change in the ownership or management of the aerodrome ;

(*b*) there is a change in the use or operation of the aerodrome ;

(*c*) there is a change in the boundaries of the aerodromes ; or

(*d*) the holder of the Aerodrome Certificate requests amendment.

12.3.13.—(*a*) The Authority shall issue an Interim Aerodrome Certificate to the applicant referred to in section 12.3.2 or the proposed transferee of an Aerodrome Certificate referred to in section 12.3.9 authorising the applicant or transferee to operate an Aerodrome if the Authority is satisfied that : Interim Aerodrome Certificate.

(1) an Aerodrome Certificate in respect of the aerodrome shall be issued to the applicant or transferred to the transferee as soon as the application procedure for the grant or transfer of an Aerodrome Certificate has been completed ; and

(2) the grant of the Interim Certificate is in the public interest and is not detrimental to aviation safety.

(*b*) An Interim Aerodrome Certificate issued pursuant to section 12.3.13(*a*) shall expire on ;

(1) the date on which the Aerodrome Certificate is issued or transferred, or

(2) the expiry date specified in the interim Aerodrome Certificate ;

Whichever is earlier.

(*c*) These regulations apply to an Interim Aerodrome Certificate in the same manner as they apply to an Aerodrome Certificate.

12.4. AERODROME MANUAL

12.4.1.—(*a*) The operator of a certified aerodrome shall have a manual to be known as the Aerodrome Manual for the aerodrome. Preparation of the Aerodrome Manual.

(*b*) The Aerodrome Manual shall :

(1) be typewritten or printed, and signed by the aerodrome operator ;

(2) be in a format that is easy to revise ;

(3) have a system for recording the accuracy of pages or amendments thereto, including a page for logging revisions ; and

(4) be organised in a manner that will facilitate the preparation, review and acceptance or approval process.

Information to be included in the Aerodrome Manual.

12.4.2. The operator of the aerodrome shall include the following particulars in an aerodrome manual as provided in IS 12.4.2, to the extent that they are applicable to the aerodrome, under the following parts :

PART 1. General information set out in Part 1 of the IS 12.4.2 on the purpose and scope of the aerodrome manual ; the legal requirement for an aerodrome certificate and an aerodrome manual as prescribed in the national regulations ; conditions for use of the aerodrome ; the aeronautical information services available and the procedures for their promulgation ; the system for recording aircraft movements and the obligations of the aerodrome operator ;

PART 2. Particulars of the aerodrome site as set out in Part 2 of the IS 12.4.2 of these regulations ;

PART 3. Particulars of the aerodrome required to be reported to the aeronautical information service as set out in Part 3 of the IS 12.4.2 of these regulations ;

PART 4. The aerodrome operating procedures and safety measures as set out in Part 4 of the IS 12.4.2 of these regulations. These shall include references to air traffic procedures such as those relevant to low visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the aerodrome manual ;

PART 5. Details of the aerodrome administration and the safety management system as set out in Part 5 of the IS 12.4.2 of these regulations.

Location of the Aerodrome Manual.

12.4.3.—(*a*) The aerodrome operator shall provide the Authority with a complete and current copy of the Aerodrome Manual ;

(*b*) The aerodrome operator shall keep at least one complete and current copy of the Aerodrome Manual at the aerodrome and one copy at the operator's principal place of business if other than the aerodrome ;

(*c*) The aerodrome operator shall make a copy of the Aerodrome Manual available for inspection by authorised officers of the Authority.

Amendment of the Aerodrome Manual.

12.4.4.—(*a*) To maintain the accuracy of the Aerodrome Manual, the Authority shall issue a written directive to an aerodrome operator requiring the operator to alter or amend the manual in accordance with that directive ;

(*b*) The aerodrome operator shall alter or amend the Aerodrome Manual, whenever necessary, in order to maintain the accuracy of the information in the manual ;

(*c*) The aerodrome operator shall submit in writing a proposed amendment to its Aerodrome Manual to the Authority at least 30 days before the proposed effective date of the amendment or alteration, unless a shorter filing period is allowed by the Authority ;

(*d*) In the case of amendments initiated by the Authority, the Authority shall notify the operator of the certified aerodrome of the proposed amendment, in writing, fixing a reasonable period within which the operator may submit written information, views, and arguments on the amendment. After considering all relevant materials presented, the Authority shall notify the operator within 30 days of any amendment adopted, or rescind the notice. The amendment becomes effective not less than 30 days after the operator receives notice of it ;

(*e*) Notwithstanding the provisions of paragraph (d) of this section, if the Authority finds there is an emergency requiring immediate action with respect to the safety of air transportation, the Authority shall issue amendment, effective without stay on the date the operator receive notice of it. In such a case, the Authority shall incorporate the findings of the emergency and a brief statement of the reason for the findings in the notice of the amendment.

The Authority's approval of the Aerodrome Manual.

12.4.5. The Authority shall approve the Aerodrome Manual and any amendments thereto, provided they meet the requirement of this part.

Aerodrome Manual Controller.

12.4.6. The aerodrome operator shall appoint a person to be the Aerodrome Manual Controller, whose functions shall include :

(*a*) keeping a record of persons who hold copies of the whole or part of the Aerodrome Manual ;

(*b*) updating of information in the manual given to those holders referred to in (*a*).

Aerodrome Design Requirements.

12.5.—(*a*) An applicant for or a holder of an Aerodrome Certificate shall provide the Authority with the following in the aerodrome manual :

(1) physical characteristics ;

(2) obstacle limitation surface ;

(3) visual aids for navigation, denoting obstacle and the restricted use areas ;

(4) Aerodrome equipment and installation ;

(5) Electrical systems and aerodrome maintenance ;

(6) an airspace classification appropriate to the characteristics of the aircraft it intends to serve, the lowest meteorological minima for each runway, and the ambient light conditions expected during the operation of aircraft ;

(*b*) The physical characteristics, obstacle limitation surfaces, visual aids, equipment and installation, electrical systems mentioned above in (1), (2), (3),(4) and (5) shall comply with the aerodrome design standards highlighted in Chapters 7, 8, 9, 10, 11,12, and 13 of the Aerodrome Standards Manual.

(*c*) The airfield lighting electrical system at an aerodrome shall be designed in such a way as to ensure that every approach, runway and taxiway lighting systems shall be interleaved up to at least two series circuits to ensure visual guidance in the event of power failure on any of the circuits.

12.6. OBLIGATIONS OF THE AERODROME OPERATOR

General.

12.6.1. The grant of an Aerodrome Certificate obliges the aerodrome operator to ensure the safety, regularity and efficiency of operations at the aerodrome, to allow authorised officers of the Authority access to the aerodrome to carry out safety audits, inspections and testing and to be responsible for notifying and reporting to the Authority as prescribed in these Regulations.

Compliance with Standards and Practices.

12.6.2. The aerodrome operator shall comply with the standards specified in the Aerodrome Standards Manual and with any conditions endorsed in the Aerodrome Certificate.

Competence of Operational and Maintenance Personnel.

12.6.3. The aerodrome operator shall employ adequate numbers of qualified and skilled personnel to perform all critical activities for aerodrome operation and maintenance.

12.6.3.1. The operator shall train all personnel who access movement and safety areas and perform duties in compliance with the Requirements of this Regulation. This training shall be completed prior to the initial performance of such duties for all personnel. Thereafter, all personnel shall be retrained at least once every 3 years. The curriculum for initial and recurrent training shall include at least the following areas :

(*a*) Aerodrome familiarisation, including aerodrome marking, lighting, and signs system ;

(*b*) Procedures for access to, and operation in, movement areas and safety areas ;

(*c*) Aerodrome communications, including radio communication between the air traffic control tower and personnel, use of the common traffic advisory frequency if there is no air traffic control tower or the tower is not in operation, and procedures for reporting unsafe aerodrome conditions ;

(*d*) Duties required under the Aerodrome Operations Manual and the requirements of this regulation ;

(*e*) Any additional subject areas required under sections 12.6.16, 12.6.18, 12.6.20 and 12.6.23 as appropriate ;

(*f*) In respect of aerodrome maintenance, the training of personnel shall include the following areas as appropriate :

(1) Maintenance of runway, taxiway and apron (paved and unpaved) ;

(2) Runway and taxiway strips and shoulders and runway end safety areas ;

(3) Aerodrome drainage and fencing ;

(4) Aerodrome Visual aids and electrical systems ;

(5) Passenger and Cargo building facilities.

(*g*) Make a record of all training completed by each individual in compliance with this section that includes, at a minimum, a description and date of training received and provide the Authority with a copy of this record, if requested ;

(*h*) As appropriate, comply with the following training requirements :

(1) Aircraft Rescue and Fire Fighting operational requirements ;

(2) Ground Vehicles and Pedestrians ;

(3) Aerodrome Inspection programme ;

(4) Wildlife Hazard management.

(*i*) Notwithstanding the requirements of 12.6.3.1 , the aerodrome operator shall develop and implement a training program for personnel engaged prior to 30th March, 2012 that will demonstrate compliance with this regulation.

12.6.3.2. The aerodrome operator shall implement a programme to upgrade the competency of the personnel referred to in section 12.6.3.1.

12.6.3.3. The aerodrome operator shall submit to the Authority for approval a training programme for operational and maintenance personnel.

Aerodrome Operations and Maintenance.

12.6.4.—(*a*) The aerodrome operator shall develop a maintenance programme for all aerodrome facilities, equipment and installations power generating plants, sewage, water works at the aerodrome to ensure serviceability.

(*b*) Subject to any directives that the Authority shall issue, the aerodrome operator shall operate and maintain the aerodrome in accordance with the procedures set out in the Aerodrome Manual ;

(*c*) To ensure the safety of aircraft, the Authority shall give written directives to an aerodrome operator to alter the procedures set out in the Aerodrome Manual ;

(*d*) To ensure the safety and maintenance of the aerodrome facilities, the aerodrome operator shall :

(*i*) provide and maintain navigational visual aids which includes: wind direction indicators, Airfield Lightings, Markings, Markers and Signs on the runway as prescribed in the Aerodrome Standards Manual.

(*ii*) provide and maintain runway surfaces including but not limited to surfacing and resurfacing, frictional coefficients, aqua planning, pavement bearing strength values of the runway.

(*iii*) submit/implement a corrective action plan for mitigating the safety concerns at an aerodrome.

(*e*) An aerodrome operator shall notify the ATC that a runway or portion thereof may be slippery when wet. A runway or portion thereof shall be determined as being slippery when wet, when the friction measurements show that the runway surface friction characteristics as measured by a continuous friction measuring device are below the minimum friction level specified in Table 14-1 of the Aerodrome Standards Manual.

(*f*) The Aerodrome operator shall coordinate with the ATS provider in order to be satisfied that appropriate air traffic services are available to ensure the safety of aircraft in the airspace associated with the aerodrome. The coordination shall cover other areas related to safety such as aeronautical information services, air traffic services, designated meteorological authorities and security.

(*g*) The Aerodrome operator shall ensure that any person accessing the airside, whether for work or inspection purposes, shall wear a yellow reflective jacket except orange reflective jacket for marshallers.

Aerodrome Operator's Safety Management System.

12.6.5.—(*a*) The aerodrome operator shall implement a safety management system acceptable to the Authority as prescribed in Nig.CARs Part 20 ;

(*b*) The aerodrome operator shall require all users of the aerodrome, including fixed-base operators, ground handling agencies and other organizations that perform activities independently at the aerodrome in relation to flight or aircraft handling, to comply with the requirements laid down by the aerodrome operator with regard to safety at the aerodrome. The aerodrome operator shall monitor such compliance ;

(*c*) The aerodrome operator may also arrange for an external audit and inspection programme for evaluating other users, including fixed-based operators, ground handling agencies and other organisations working at the Aerodrome.

Crew briefing.

12.6.6. The aerodrome operator shall provide suitable and easily accessible space to be used for the purpose of crew briefing at the aerodrome.

Access to the Aerodrome by Authorised Inspectors.

12.6.7.—(*a*) Personnel so authorised by the Authority shall inspect and carry out tests on the aerodrome facilities, services and equipment, inspect the aerodrome operator's documents and records and verify the aerodrome operator's safety management system before the Aerodrome Certificate is granted or renewed and, subsequently, at any other time, for the purpose of ensuring safety at the aerodrome ;

(*b*) The Authority shall carry out periodic inspections and audits on aerodrome facilities, services and equipment in order to meet its continuing surveillance obligation and ensure safety of aerodrome operations ;

(*c*) An aerodrome operator shall, at the request of the person referred to in paragraph (*a*) above allow access to any part of the aerodrome or any aerodrome facility, including equipment, records, documents and operational personnel, for the purpose referred to in paragraph (*a*) above ;

(*d*) The aerodrome operator shall cooperate with personnel so authorized by the Authority in conducting the activities referred to in paragraph (*a*) above.

Removal of obstructions from the Aerodrome Surface.

12.6.8. An aerodrome operator shall remove from the aerodrome surface any vehicle or other obstruction that is likely to be hazardous.

Warning Notices.

12.6.9. When low flying aircraft, at or near aerodrome or taxiing aircraft are likely to be hazardous to people or vehicular traffic, the aerodrome operator shall :

(*a*) post hazard warning notices on any public way that is adjacent to the manoeuvering area ; or

(*b*) if such a public way is not controlled by the aerodrome operator, inform the appropriate body responsible for posting the notices on the public way that there is a hazard.

Retention of records.

12.6.10. The Aerodrome operator shall establish and retain personnel training records as prescribed under section 12.6.3.1 (*g*) and safety inspection records as prescribed in the Aerodrome Standards Manual (Appendix G).

Aerodrome Data.

12.6.11. The Aerodrome operator, in determining and reporting Aerodrome data shall :

(*a*) Ensure adherence to accuracy, integrity and protection requirements set forth in Chapter 6, Section 6.2.1 of the Aerodrome Standards Manual ;

(*b*) Maintain the integrity of aeronautical data and avoid the corruption of data at all times ;

(*c*) Ensure that data are measured or described appropriately as prescribed in Chapter 6, Section 6.2.1 of the Aerodrome Standards Manual.

Notifying and reporting.

12.6.12.—(*a*) Notification of inaccuracies in Aeronautical Information Service (AIS) Publications-An Aerodrome Operator shall review all Aeronautical Information Publications (AlPs), AlP Supplements, AlP Amendments, Notices to Airmen (NOTAMs), Pre-flight Information Bulletins and Aeronautical Information Circulars issued by the AIS on receipt thereof and immediately after such reviews shall notify the Authority of any inaccurate information contained therein that pertains to the Aerodrome ;

(*b*) Notification of changes to the Aerodrome facilities, equipment and level of service planned in advance-An Aerodrome operator shall notify the Authority, in writing, at least 72 days before effecting any change to the aerodrome facility or equipment or the level of service at the Aerodrome that has been planned in advance and which is likely to affect the accuracy of the information contained in any AIS publication referred to in section 12.6.12(*a*) ;

(*c*) Issues requiring immediate notification-Subject to section 12.6.12(*d*), an Aerodrome operator shall arrange for the Air Traffic Control and the Authority to receive immediate notice detailing any of the following circumstances of which the operator has knowledge :

(1) *Obstacles, Obstructions and Hazards* :

(*i*) any projections by an object through an obstacle limitation surface relating to the Aerodrome ; and

(*ii*) the existence of any obstruction or hazardous condition affecting aviation safety at or near the Aerodrome ;

(2) *Level of service*—Reduction in the level of service at the Aerodrome as set out in any of the AIS publications referred to in section 12.6.12(*a*) above ;

(3) *Movement area*—Closure of any part of the movement area of the Aerodrome ; and

(4) Any other condition that could affect aviation safety at the Aerodrome and against which precautions are warranted.

(*d*) *Immediate notification to pilots*—When it is not feasible for an Aerodrome operator to arrange for the air traffic control unit and the Authority to receive notice of a circumstance referred to in section, 12.6.12(*c*) above, the operator shall give immediate notice direct to the pilots who may be affected by that circumstance.

(*e*) Any person or corporate organisation shall report to the Authority any proposed erection of high rise man-made structures within 15km distance radius from aerodrome reference point to ensure the safety of airspace for aircraft operations.

(*f*) *Mandatory occurrence report*—An Aerodrome operator shall submit immediately to the Authority, mandatory occurrence report of any of the accident or incident at the aerodrome enumerated in section 5.3.2.2 of the Aerodrome Standards Manual.

12.6.13. The aerodrome operator shall : Visual Aids for Navigation.

(*a*) establish procedures to ensure that a system of preventive maintenance and checking of the Aerodrome visual aids such as Wind Direction Indicator, Airfield lighting, Markings, Markers and Signs for navigation is in place ;

(*b*) ensure that each visual aid for navigation provides reliable and accurate guidance to the user ;

(*c*) establish a percentage of allowable serviceable lights that will ensure continuity of guidance to the user ;

(*d*) restore any unserviceable or deteriorated items back into service without undue delay ;

(*e*) provide and maintain visual aids at the Aerodrome as prescribed in chapter 9 and 14.5 of the Aerodrome Standards Manual.

12.6.14. The aerodrome operator shall : Works on Aerodrome.

(*a*) prepare and submit to the Authority for approval a work safety plan before commencement of works to ensure that the works carried out on the Aerodrome do not endanger aircraft operations ;

(*b*) appoint one or more trained works safety officers to ensure full compliance with the procedures and precautions in paragraph (*a*) above ;

(*c*) coordinate work and ensure compliance with safety requirements and standards for routine maintenance, minor or major construction or maintenance works at its Aerodrome, as prescribed in Chapter 5 of the Aerodrome Standards Manual ;

(*d*) provide liaison between any maintenance team or contractor, ATC and safety works officer so as to ensure compliance with safety rules in the areas of :

(1) R/T procedures to be used ;

(2) Isolation of work areas ;

(3) General working rules ;

(4) Hazards to personnel working on the Aerodrome ;

(5) Marking and Lighting on cranes or equipment that is likely to penetrate the obstacle clearance zone ;

(6) Effect on navigational aids and other electronic landing aids ;

(7) Paved area cleanliness after work ;

(*e*) Carry out works on Aerodrome as prescribed in Chapter 5, section 5.1 of the Aerodrome Standards Manual.

12.6.15. AERODROME EMERGENCY PLAN

General.

12.6.15.1.—(*a*) After consultation with representatives of the air operators that use the aerodrome and with community organisations that may be of assistance during emergency operations at the aerodrome or in its vicinity, the aerodrome operator shall develop and maintain an emergency plan for the purpose of identifying :

(1) the emergencies that can reasonably be expected to occur at the aerodrome or in its vicinity and that could be a threat to the safety of persons or to the operation of the aerodrome ;

(2) the measure to activate the emergency plan for each type of emergency ;

(3) the community organisations capable of providing assistance in an emergency ; and

(4) any additional resources available at the aerodrome and in the surrounding area.

(*b*) The aerodrome operator shall establish a degree of supervision and control sufficient to manage the size and complexity of an emergency.

(*c*) The aerodrome operator shall maintain at the aerodrome, in the format of a manual, a copy of an updated version of the emergency plan ; and provide a copy to the Authority on request.

(*d*) The aerodrome operator shall :

(1) update the emergency plan as necessary to ensure its effectiveness in emergency operations ; and

(2) review the plan and make any required updates at least once a year after consultation with a representative sample of the air operators that use the aerodrome and the community organisations identified in the plan.

Content of the AEP.

12.6.15.2.—(*a*) In an emergency plan, the aerodrome operator shall, at a minimum :

(1) identify the potential emergencies, including :

(*i*) an aircraft accident or incident :

(*a*) within the aerodrome boundaries, and

(*b*) within a critical rescue and fire-fighting access area that extends 1000m beyond the ends of a runway and 150m at 90° outwards from the centerline of the runway including any part of that area outside the aerodrome boundaries.

(*ii*) an aircraft emergency declared by either air traffic services or a pilot, (*iii*) a fuel spill that spreads at least 1.5m in any direction or exceeds 12mm in depth,

(*iv*) a medical emergency,

(*v*) a fire in which aerodrome operations or passenger safety is threatened,

(*vi*) an emergency that is related to a special aviation event and that might have an impact on aerodrome operations,

(*vii*) a natural disaster, and

(*viii*) any other emergency that is a threat or is likely to be a threat to the safety of persons or to the operation of the aerodrome ;

(2) identify the organisations at the aerodrome and the community organisations that are capable of providing assistance during an emergency at an aerodrome or in its vicinity, provide the telephone numbers and other contact information for each organisation and describe the type of assistance each can provide ;

(3) identify the other resources available at the aerodrome and in the surrounding communities for use during emergency response or recovery operations and provide their telephone numbers and other contact information ;

(4) describe for emergency situations, the lines of authority and the relationships between the organisations identified in the emergency plan and describe how actions will be coordinated among all and within each of the organisations ;

(5) identify for emergency situations, the supervisors and describe the responsibilities of each ;

(6) specify the positions occupied by the aerodrome personnel who will respond to an emergency and describe the specific emergency response duties of each ;

(7) identify the on-scene commander and describe the commander's emergency response duties ;

(8) provide Authorisation for a person to act as an on-scene commander or a supervisor if they are not aerodrome personnel ;

(9) set out the criteria to be used for positioning the on-scene commander within visual range of an emergency scene ;

(10) set out the measures to be taken to make the on-scene commander easily identifiable at all times by all persons responding to an emergency ;

(11) if initial on-scene control has been assumed by a person from a responding organisation, describe the procedure for transferring control to the on-scene commander ;

(12) describe any training and qualifications required for the on-scene commander and the aerodrome personnel identified in the emergency plan ;

(13) describe the method for recording any training provided to the on-scene commander and aerodrome personnel ;

(14) describe the communication procedures and specify the radio frequencies to be used to link the operator of the aerodrome with :

(*i*) the on-scene commander, and

(*ii*) the providers of ground traffic control services (if applicable) and air traffic control services or any other flight information unit at the aerodrome ;

(15) describe the communication procedures allowing the on-scene commander to communicate with the organisations identified in the emergency plan ;

(16) identify the alerting procedures that :

(*i*) activate the emergency plan,

(*ii*) establish the necessary level of response,

(*iii*) allow immediate communication with the organisations identified in the emergency plan in accordance with the required level of response,

(*iv*) if applicable, confirm the dispatch of each responding organisation ;

(*v*) establish the use of standard terminology in communications, and

(*vi*) establish the use of the appropriate radio frequencies as set out in the emergency plan ;

(17) specify :

(*i*) the aerodrome communication equipment testing procedures,

(*ii*) a schedule for the testing, and

(*iii*) the method of keeping records of the tests ;

(18) specify the location of the emergency coordination centre used to provide support to the on-scene commander ;

(19) describe the measures for dealing with adverse climatic conditions and darkness for each potential emergency set out in paragraph (*a*)(1) ;

(20) describe the procedures to assist persons who have been evacuated if their safety is threatened or airside operations are affected ;

(21) describe the procedures respecting the review and confirmation of the following to permit the return of the aerodrome to operational status after an emergency situation :

(*i*) emergency status reports,

(*ii*) co-ordination with appropriate judicial authorities and the investigator designated by the accident investigation entity regarding the accident site conditions, (*iii*) disabled aircraft removal,

(*iv*) airside inspection results,

(*v*) accident or incident site conditions, and

(*vi*) air traffic services and NOTAM coordination ;

(22) describe the procedures for controlling vehicular flow during an emergency to ensure the safety of vehicles, aircraft and persons ;

(23) specify the procedures for issuing a NOTAM in the event of an emergency affecting the critical category for firefighting required under section 12.6.16 of these Regulations, or changes or restrictions in facilities or services at the aerodrome during and after an emergency ;

(24) describe the procedures for preserving evidences as it relates to :

(*i*) aircraft or aircraft part removal, and

(*ii*) the site of the accident or incident ;

(25) describe the procedures to be followed, after any exercise set out in section 12.6.15.6 or the activation of the plan for an emergency that requires a full emergency standby, in the following cases :

(*i*) a post-emergency debriefing session with all participating organisations,

(*ii*) the recording of the minutes of the debriefing session,

(*iii*) an evaluation of the effectiveness of the emergency plan to identify deficiencies,

(*iv*) changes, if any, to be made in the emergency plan, and

(*v*) partial testing subsequent to the modification of an emergency plan ;

(26) describe :

(*i*) the process for an annual review and update of the emergency plan, and

(*ii*) the administrative procedure for the distribution of copies of an updated version of the emergency plan to the aerodrome personnel who require them and to the community organisations identified in the plan ; and

(*iii*) the procedures to assist in locating an aircraft when the aerodrome receives notification that an Emergency Locator Transmitter (ELT) or any advanced system of tracking aircraft in an emergency has been activated.

(*b*) The aerodrome operator shall include a copy of the following documents in the emergency plan :

(1) the signed agreements, if any, between the aerodrome operator and the community organisations that provide emergency response services to the aerodrome ; and

(2) an aerodrome grid map.

Emergency Operations Centre and Command Post.

12.6.15.3.—(*a*) A fixed Emergency Operations Centre and a mobile command post shall be available for use during an emergency.

(*b*) The Emergency Operations Centre shall be a part of the aerodrome facilities and shall be responsible for the overall coordination and general direction of the response to an emergency.

(*c*) The command post shall be a facility capable of being moved rapidly to the site of an emergency, when required, and shall undertake the local coordination of those agencies responding to the emergency.

(*d*) A person shall be assigned to assume control of the Emergency Operations Centre and, when appropriate, another person the mobile command post.

On-Scene Commander.

12.6.15.4.—(*a*) The on-scene commander shall be at the emergency site and shall not have other duties during an emergency, unless the life of a person is in danger nearby and the on-scene commander is alone and has the ability to assist the person.

(*b*) The aerodrome operator shall establish procedures that make the on-scene commander easily identifiable by all persons responding to an emergency.

Aircraft Crash Charts and Aerodrome Grid Maps.

12.6.15.5.—(*a*) For aircraft operating in a passenger or cargo configuration, the aerodrome operator shall make available to the emergency coordination centre aircraft crash charts specific to the aircraft used by the air operators that use the aerodrome, and shall provide copies of the charts to the organisations responsible for fire-fighting services that are identified in the emergency plan ; and the on-scene commander.

(*b*) In the case of aircraft that have or may have a seating configuration of not more than nine passenger seats, the aerodrome operator may use, instead of the aircraft crash charts referred to in paragraph (*a*), other documents containing equivalent information.

(*c*) The aerodrome operator shall develop and review and update annually, if necessary, an aerodrome grid map that includes a minimum of :

(1) an area covering at least one kilometer around each runway ;

(2) the aerodrome access roads and gates ; and

(3) the location of meeting points to which persons and vehicles that are responding to an emergency situation proceed in order to receive instructions.

(*d*) The aerodrome operator shall provide copies of the aerodrome grid map to the aerodrome personnel and organisations identified in the aerodrome emergency plan.

12.6.15.6.—(*a*) The aerodrome operator shall assign specific emergency response duties, other than those of an on-scene commander or a supervisor, only to those aerodrome personnel who are identified in the emergency plan and who : Personnel and Training.

(1) are knowledgeable of their duties as described in the plan ; and

(2) have the skills to carry out their duties.

(*b*) The aerodrome operator shall assign to act as an on-scene commander or a supervisor only those aerodrome personnel, or other persons authorised by the operator in the emergency plan, who are :

(1) knowledgeable about the contents of the emergency plan ;

(2) familiar with the procedures for the overall coordination of emergency operations at an emergency site ; and

(3) trained for the particular role that they perform.

(*c*) The aerodrome operator shall :

(1) keep records of the training that was received by persons to meet the requirements of paragraphs (*a*) and (*b*) ;

(2) preserve the records of training for five years after the day on which the training was received ; and

(3) submit a copy of the training records to the Authority on request.

12.6.15.7.—(*a*) The aerodrome operator shall test the emergency plan by conducting a full-scale emergency exercise at intervals not exceeding two years. Testing of the Emergency Plan.

(*b*) The aerodrome operator shall conduct full-scale emergency exercises based on scenarios that relate to a major aircraft accident and, at a minimum, the exercises shall include the assembly and deployment of fire-fighting, policing and medical services organisations.

(*c*) The aerodrome operator shall conduct a partial emergency exercise each year in which no full-scale emergency exercise is conducted.

(*d*) The aerodrome operator, when conducting a partial emergency exercise, shall have :

(1) an up-to-date list of the participants and their telephone numbers and the radio frequencies used to communicate ;

(2) fully operational communication equipment ; and

(3) a copy of the aerodrome grid map.

(*e*) The aerodrome operator shall base the partial emergency exercises on scenarios that include an aircraft accident or incident.

(*f*) The aerodrome operator shall provide the Authority with a notice in writing of the date and time when a partial or full-scale exercise is to be carried out at least 90 days before the day of the exercise.

(*g*) The Authority shall observe the testing of an emergency plan.

(*h*) After each exercise, the aerodrome operator shall conduct a debriefing with all the organisations identified in the plan and a representative of the aerodrome personnel who participated to evaluate the effectiveness of the emergency plan and identify deficiencies.

(*i*) The aerodrome operator shall implement an action plan to correct any deficiencies in the emergency plan that was identified during a debriefing session.

(*j*) The aerodrome operator shall record :

(1) the date of an exercise ;

(2) the type of exercise ;

(3) the minutes of the debriefing session after the exercise ; and

(4) any action plans to correct deficiencies that were identified during a debriefing session.

(*k*) The aerodrome operator shall keep an exercise record for 10 years after the day on which the record is made.

(*l*) The aerodrome operator shall submit debriefing minutes and corrective action plans relating to an exercise to the Authority on request.

Authorisation.

12.6.15.8. The Authority may, on application by the aerodrome operator, provide to the operator written Authorisation not to conduct the full-scale exercise during an interval set out in section 12.6.15.7 paragraph (*a*) if the operator demonstrates that the testing requirements for a full-scale exercise have been met through an activation of the emergency plan in response to an emergency during that interval.

Rescue and Fire-Fighting at Aerodromes.

12.6.16.1. The aerodrome operator shall provide the aircraft fire-fighting vehicles and the personnel that correspond to the critical category for fire-fighting and published in the Aeronautical Information Publications (AIP) to respond to an aircraft emergency at the aerodrome.

Hours of Operation of an Aircraft Fire-fighting Service.

12.6.16.2.—(*a*) the aerodrome operator shall establish the hours of operation of an aircraft fire-fighting service and ensure that those hours coincide with the hours of movements of operating aircraft at the aerodrome; and ensure that the critical category for fire fighting and the hours of operation of an aircraft fire fighting service are published in the Aeronautical Information Publications (AIP) and in a NOTAM, if the NOTAM is published earlier.

(*b*) The aerodrome operator shall provide an aircraft fire-fighting service until the aircraft operating at the aerodrome has taken off or landed or the flight has been cancelled.

12.6.16.3. An aircraft category for fire-fighting set out in column I of an item of the table below to this subsection shall be established for an aircraft based on the aircraft overall length set out in column II of the item and the aircraft maximum fuselage width set out in column III of that item. Aircraft Category for Fire Fighting.

TABLE 1

Column I Aircraft Category for Fire Fighting	*Column II Aircraft Overall Length*	*Column III AircraftMaximum Fuselage Width*
1	0 up to but not including 9 m	2 m
2	9 m up to but not including 12 m	2 m
3	12 m up to but not including 18 m	3 m
4	18 m up to but not including 24 m	4 m
5	24 m up to but not including 28 m	4 m
6	28 m up to but not including 39 m	5 m
7	39 m up to but not including 49 m	5 m
8	49 m up to but not including 61 m	7 m
9	61 m up to but not including 76 m	7 m
10	76 m up to but not including 90 m	8 m

Where the fuselage width of an aircraft that has an overall length within the range set out in column II of an item of the table to paragraph (*a*) is greater than the aircraft maximum fuselage width set out in column III of the item, the aircraft category for fire fighting for the aircraft shall be one category higher than the category set out in column I of that item.

12.6.16.4.—(*a*) The aerodrome operator shall compile monthly statistics in respect of the number of enplaned and deplaned passengers. Statistics on the Number of Passengers and Aircraft Movements.

(*b*) The aerodrome operator shall compile monthly statistics setting out number of movements by operating aircraft in each aircraft category for fire fighting. The aerodrome operator shall, at least once every six months, review the monthly statistics for the twelve months preceding the date of the review and determine the three consecutive months with the highest total number of movements by operating aircraft in all aircraft categories for fire fighting.

(*c*) Where the review shows more than one period of three consecutive months having the same total number of movements by operating aircraft, the period to be used for the purposes of section 12.6.16.5 of these Regulations is the period involving the highest aircraft category for firefighting or where those periods involve the same highest aircraft category for fire fighting, the period involving the greatest number of movements in that category.

(*d*) The operator of a designated aerodrome shall retain the monthly statistics referred to in paragraph (*a*) and (*b*) for five years after the date of the review; and provide them to the Authority at the Authority's request.

Critical Category for Fire Fighting.

12.6.16.5.—(*a*) The aerodrome operator shall determine a critical category for fire fighting for the aerodrome based on the number of movements at the aerodrome during the three-month period determined in accordance with section 12.6.16.5(*c*) or (*d*) by operating aircraft in the highest and the next highest aircraft categories for fire fighting.

(*b*) Where, during the period referred to in paragraph (*a*), the number of movements at an aerodrome by aircraft in the highest aircraft category for firefighting is 700 or more, the critical category for firefighting is equivalent to that highest aircraft category for fire fighting.

(*c*) If, during the period referred to in paragraph (*a*), the number of movements at an aerodrome by aircraft in the highest aircraft category for firefighting is less than 700, the critical category for firefighting shall be determined by decreasing the highest aircraft category for firefighting by one category.

(*d*) If the aerodrome operator anticipates a period of one or more hours of movements of aircraft of a lower aircraft category for firefighting only, the operator may reduce the critical category for fire fighting to the highest aircraft category for firefighting anticipated for that period if the operator documents the anticipated situation; and notifies the appropriate air traffic control unit or any other flight information unit of the reduced critical category for fire fighting for publication in a NOTAM.

Extinguishing Agents and Aircraft Fire-fighting Vehicles.

12.6.16.6. The aerodrome operator shall provide its aircraft fire-fighting service with both the principal and the complementary extinguishing agents and the equipment delivering the agents that meet the requirements detailed in implementing standards and the Aerodrome Standards Manual.

Adjustment to Higher Requirements.

12.6.16.7. Where an increase in the number of movements by, or in the size of, operating aircraft at an aerodrome results in the establishment for the aerodrome of a higher critical category for fire-fighting than the previous category, the operator of the aerodrome shall meet the requirements for that higher category as set out in Table 2 within one year after the date of establishing the higher critical category for fire fighting.

Personnel requirements.

12.6.16.8.—(*a*) *Minimum Personnel* — During the hours of operation of the aircraft fire-fighting service, the aerodrome operator shall ensure that trained aircraft fire-fighting personnel are available at their assigned post and in sufficient number to operate the aircraft fire-fighting vehicles and apply the extinguishing agents required by section 12.6.16.6.

(*b*) *Training of Personnel* — The aerodrome operator shall ensure that all personnel assigned to aircraft fire-fighting duties are trained in accordance with appropriate aircraft fire-fighting standards :

(*i*) The aerodrome operator shall ensure that training of ARFF personnel are conducted at approved Aerodrome Fire-fighing Training Organizations by the Authority.

(*ii*) The Aerodrome Firefighting Training Organisation shall comply with the training requirements detailed in the Advisory Circular-NCAA-AC-ARD005 "Assessing Competence of ARFF Training Organizations and ARFF Personnel".

(*c*) *Equipment and Protective Clothing* — The aerodrome operator shall provide all personnel assigned to aircraft fire-fighting duties with the equipment and protective clothing necessary to perform their duties.

(*d*) *Fire-fighter Qualifications*

(1) No aerodrome operator shall permit a person to act and no person shall act as an aircraft firefighter at an aerodrome unless the person has, within the previous 12 months, successfully completed the training specified in this section.

(2) The aerodrome operator shall :

(*i*) maintain, for each aircraft firefighter, a training record containing the information specified in this section.

(*ii*) preserve the training record for three years after the aircraft firefighter leaves the service of the aerodrome ; and

(*iii*) at the request of the Authority, provide the Authority with a copy of the training record.

Personnel Readiness.

12.6.16.9. The aerodrome operator shall ensure that, during the hours of operation of its aircraft fire-fighting service; of the fire-fighting personnel required to be available, the number of personnel capable of immediate response is sufficient to meet the requirements of the response test referred to in this section 12.6.16.10.

Response Test.

12.6.16.10.—(*a*) The aerodrome operator shall carry out a response test to evaluate the response time and effectiveness of the aircraft fire-fighting service required to be maintained during the hours of operation specified every 12 months ; and at any time at the request of the Authority, where the Authority has reasonable grounds to believe that the aircraft fire-fighting service at the aerodrome does not meet the requirements of this section.

(*b*) The aerodrome operator shall give the Authority at least 30 days written notice of the date on which a response test is to be carried out.

(*c*) The aerodrome operator shall provide the Authority with a copy of the results of a response test within 14 days after the date of the test.

(*d*) A response test at an aerodrome has a satisfactory result if within three minutes after an alarm is sounded, aircraft fire-fighting vehicles in a number sufficient for applying the principal extinguishing agent at 50 per cent of the total discharge capacity required are dispatched from their assigned position and, under optimum surface and visibility conditions at the aerodrome, reach any point of each operational runway, or another predetermined point of comparable distance and terrain.

(*e*) The aerodrome operator shall record the results of a response test and shall preserve the records for two years after the date of the test.

(*f*) If a response test does not have a satisfactory result, the aerodrome operator shall :

(1) within six hours after the test, identify the deficiencies that caused the result and notify the appropriate air traffic control unit or any other flight information unit of the critical category for fire fighting that corresponds to the level of service that can be provided, for publication in a NOTAM ; and

(2) within seven days after the test, if any deficiency is not corrected, submit a plan to the Authority specifying the measures necessary to obtain a satisfactory result and the dates by which they must be taken, which shall be as early as practicable given the circumstances.

(*g*) The aerodrome operator shall implement the submitted plan by the dates specified in the plan.

Communication and Alerting System.

12.6.16.11. *Requirement* : The aerodrome operator shall provide a communication and alerting system that meets the aircraft fire-fighting requirements as specified in IS 12.6.16.13.).

Apron Control and Management Services.

12.6.17. The aerodrome operator shall :

(*a*) ensure that the Aerodrome control service and the apron control service work in harmony to facilitate safe transition of aircraft between apron control and Aerodrome control ;

(*b*) ensure close liaison and co-operation between the Apron Control Unit and ATS unit through radio communication and monitoring devices ;

(*c*) keep an accurate record of movement information including aircraft arrival times, landings and take-offs ;

(*d*) provide marshalling and leader van services and aircraft stand allocation ;

(*e*) provide serviceable avio-bridges and docking devices where passenger loading is done through bridges ;

(*f*) control apron movements by ground vehicles using the Aerodrome operator's apron safety rules as stipulated in approved Aerodrome Manual ;

(*g*) provide blast fences to protect personnel and vehicles from jet blast and propeller slipstreams ;

(*h*) ensure that aircraft operators and fuel companies adhere strictly to the holder's procedures during the fuelling of aircraft ;

(*i*) ensure that apron is swept clean and de-greased regularly and when necessary ;

(*j*) keep records of activities and dissemination of same to appropriate establishments when necessary ;

(*k*) provide apron control and management services as prescribed in Chapter 13 Section 13.2.5 of the Aerodrome Standards Manual.

Ground Vehicles and Pedestrians.

12.6.18. The aerodrome operator shall :

(*a*) restrict access to movement areas and safety areas only to those ground and/or operations vehicles in possession of airside vehicle permit, company logo, drivers with airside driver's permit and pedestrians necessary for Aerodrome and aircraft operations ;

(*b*) provide adequate procedures for the safe and orderly access to, and operation on the Aerodrome operational areas, by ground vehicles and pedestrians ;

(*c*) establish and implement provisions identifying the consequences of non-compliance with the procedures in (*b*) by an employee, tenant or contractor ;

(*d*) when an air traffic control service is in operation, ensure that each ground vehicle or pedestrian in movement areas or safety areas is controlled by :

(1) two-way radio communications between each ground vehicle or pedestrian and the control tower ;

(2) an escort vehicle with two-way communication with the control tower ; or

(3) adequate measures authorised by the Authority for controlling ground vehicles and pedestrians, such as markings, signs, signals or guards, when it is not operationally practicable to have two-way radio communications between the tower and the ground vehicle, escort or pedestrian.

(*e*) ensure that each employee, tenant, or contractor: is trained on the procedures required in this Part "Ground vehicles and pedestrians" prior to moving on foot, or in a ground vehicle, in the movement areas or safety areas of the Aerodrome ;

(*f*) maintain the following records :

(*i*) a description and date of training for personnel and use of ground vehicles on movement areas and safety areas ;

(*ii*) a record for each vehicle and individual access to movement areas ;

(*iii*) a description and date of any accident or incident in the movement areas involving aircraft and ground vehicle, or aircraft and aircraft, or aircraft and pedestrians ;

(*g*) ensure ground vehicles and pedestrian operations as prescribed in Chapter 13, Section 13.2.7 of the Aerodrome Standards Manual.

Protection of Navigation and Landing Aids.

12.6.19. The aerodrome operator shall:

(*a*) prevent the construction of facilities on the Aerodrome that would adversely affect the operation of any electronic or visual navigation aid or air traffic service ;

(*b*) prevent, as far as it is within the certificate holder's authority, an interruption of the visual or electronic signals of navigation aids ;

(*c*) provide protection of navigation/landing aids as prescribed in Chapter 9 of the Aerodrome Standards Manual.

Aerodrome Inspection Programme.

12.6.20. The aerodrome operator shall :

(*a*) carry out special inspections :

(1) as soon as practicable after an aircraft accident or incident within the meaning of the requirements specified in ICAO Annex 13 ;

(2) during any period of construction or repair of the Aerodrome facilities or equipment that is critical to the safety of aircraft operations ;

(3) at any time when there are conditions at Aerodrome such as strong winds and rain, that could affect aviation safety ;

(4) after construction, repair, or maintenance works have been carried out on Aerodrome facilities and equipment.

(*b*) carry out daily serviceability inspections ;

(*c*) provide initial and recurrent training once in every three (3) years for any person who has duties in respect of the aerodrome inspection programme in at least the following areas :

(1) Aerodrome familiarisation, including aerodrome signs, marking and lighting ;

(2) Aerodrome Emergency Plan ;

(3) Notice to Airmen (NOTAM) notification procedures ;

(4) Procedures for pedestrians and ground vehicles in movement areas and safety areas ;

(5) Procedures for reporting changes in movement area condition ; and

(*d*) maintain a reporting system to ensure prompt correction of unsafe aerodrome facilities noted during the inspection, including wildlife strikes.

(*e*) maintain a record of each person's training for a period of five (5) years and provide the Authority with a copy of any record, if requested.

Public Protection and Aerodrome Security.

12.6.21. The aerodrome operator, in addition to satisfying the requirements stipulated in sections 12.6.11 to 12.6.20 and provisions of Part 17 of these Regulation shall :

(*a*) provide aerodrome perimeter fence, road, barriers and doors with controlled access to prevent inadvertent and unauthorised entry of animals and human beings and where necessary provide security lighting on the perimeter fence ;

(*b*) affix signs and prohibition notices at the perimeter of security areas within the Aerodrome ;

(*c*) designate an isolated aircraft parking position with adequate lighting facility in his or her Aerodrome for the parking of an aircraft that is known or believed to be the subject of unlawful interference, or which for other security reason needs isolation from normal Aerodrome activities ;

(*d*) provide aerodrome security in accordance with existing laws and regulations.

Aeronautical Studies.

12.6.22. The applicant for or holder of aerodrome certificate shall :

(*a*) carry out an aeronautical study to assess the impact of deviations from the Aerodrome standards in order to :

(*i*) provide justification for a deviation from Aerodrome standards on the grounds that an equivalent level of safety shall be attained by other means ;

(*ii*) present alternative means of ensuring the safety of aircraft operations ;

(*iii*) estimate the effectiveness of each alternative ; and

(*iv*) recommend procedures to compensate for the deviation ;

(*b*) publish approval of any deviation in AIP and seek and obtain approval of the Authority on paragraph (*a*) so as to maintain the currency of his or her Aerodrome certificate ;

(*c*) engage reputable expertise with practical experience and specialised knowledge in relevant areas in the conduct of technical analysis ;

(*d*) notify promptly pilots, AIS and the Authority, in compliance with these Regulations, where the only reasonable means of providing an equivalent level of safety is to adopt suitable procedures with cautionary advice ;

(*e*) carry out aeronautical studies as prescribed in Chapter 2 Section 2.1.4 of the Aerodrome Standards Manual and associated guidance Material.

12.6.23. AERODROME WILDLIFE PLANNING AND MANAGEMENT

Application.

12.6.23.1.—(*a*) This subsection applies to aerodromes :

(1) that are located in a defined area and that in the opinion of the Authority should be certified in the public interest and to enhance the safe operation of the aerodromes ;

(2) that have a waste disposal facility within 13km of the geometric centre of the aerodrome ;

(3) that had an incident where a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine ; or

(4) where the presence of wildlife hazards, including those referred to in IS 12.6.23.1 has been observed in an aerodrome flight pattern or movement area. Subsection 12.6.23.3 applies to all aerodromes.

Wildlife Strikes.

(*b*) An Aerodrome Operator shall relate with the appropriate Land use authority to ensure that no wildlife attractant is located within the vicinity of the airport.

12.6.23.2.—(*a*) The aerodrome operator shall keep records of all wildlife strikes at the aerodrome, including those reported by :

(1) pilots ;

(2) ground personnel ; and

(3) aircraft maintenance personnel when they identify damage to an aircraft as having been caused by a wildlife strike.

(*b*) Wildlife remains that are found within 60 meters of a runway or an airside pavement area are presumed to be a wildlife strike unless another cause of death is identified.

(*c*) The aerodrome operator shall submit a written and dated report to the Authority using the ICAO IBIS form for each wildlife strike, within 30 days of its occurrence.

Risk Analysis.

12.6.23.3.—(*a*) The aerodrome operator shall collect information in respect of the requirements set out in IS 12.6.23.3 ;

(*b*) The aerodrome operator shall, after consultation with a representative of the operators in respect of an aircraft, air operators and private operators that use the aerodrome, conduct a risk analysis that evaluates the collected information ;

(*c*) The risk analysis shall be in writing and include :

(1) an analysis of the risks associated with the wildlife hazards, including those referred to in IS 12.6.23.1 ; and

(2) the measures that are necessary to manage or remove the hazards or to manage or mitigate the risks.

(*d*) The aerodrome operator shall, at the request of the Authority, make the risk analysis available for inspection.

12.6.23.4. AERODROME WILDLIFE MANAGEMENT PLAN

12.6.23.4.1.—(*a*) The aerodrome operator shall develop an aerodrome wildlife management plan in accordance with IS 12.6.23.4.1 ; General.

(*b*) The aerodrome operator shall submit the plan to the Authority, on request by the Authority, in accordance with the requirements set out in IS 12.6.23.4.1(*b*) ;

(*c*) The aerodrome operator shall keep a copy of the plan at the aerodrome and it shall, on request by the Authority, be made available to the Authority ;

(*d*) Aerodrome operator shall implement the plan ;

(*e*) The aerodrome operator shall review the plan every two years ;

(*f*) The aerodrome operator shall amend the plan and submit the amended plan to the Authority within 30 days of the amendment if :

(1) the amendment is necessary as a result of the review conducted under (*e*) above ;

(2) an incident has occurred in which a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine ;

(3) a variation in the presence of wildlife hazards, including those referred to in IS 12.6.23.1, has been observed in an aerodrome flight pattern or movement area ; or

(4) there has been a change :

(*i*) in the wildlife management procedures or in the methods used to manage or mitigate wildlife hazards ;

(*ii*) in the types of aircraft at the aerodrome ; or

(*iii*) in the types of aircraft operations at the aerodrome.

12.6.23.4.2. An aerodrome wildlife management plan shall : Content.

(1) identify and describe the risks associated with all wildlife hazards, including those referred to in IS 12.6.23.1, at or near the aerodrome that might affect the safe operation of aircraft, including the proximity of any waste disposal facility or migration route affecting wildlife populations near the aerodrome ;

(2) specify the particular measures that are used by the aerodrome operator to manage or mitigate the risks ;

(3) identify and describe the actions that are used by the aerodrome operator to satisfy the requirements set out in IS 12.6.23.4.2 in respect of wildlife strikes, wildlife management logs, and evaluations of habitats, land uses and food sources at or near the aerodrome ;

(4) set out procedures for the management of aerodrome habitats that might attract wildlife ;

(5) set out procedures that prohibits the feeding of wildlife and the exposure of food wastes ;

(6) set out procedures to ensure that all endangered or protected wildlife at the aerodrome are inventoried ;

(7) identify the role of the personnel and agencies involved in wildlife management issues and provide the contact numbers for each ; and

(8) provide details of any wildlife hazard awareness program.

Training.

12.6.23.4.3.—(*a*) The aerodrome operator shall :

(1) provide training for any person who has duties in respect of the aerodrome wildlife management plan at least once every three years regarding their assigned duties and the matters set out in IS 12.6.23.4.3 ; and

(2) ensure that any person who has duties in respect of the aerodrome wildlife management plan holds any required firearm permit.

(*b*) The aerodrome operator shall maintain a record of each person's training for a period of ten years and provide the Authority with a copy of any record, if requested.

Communication and Alerting Procedure.

12.6.23.4.4. The aerodrome operator shall establish a communication and alerting procedure for wildlife management personnel in accordance with IS 12.6.23.4.4 to alert pilots as soon as possible of the wildlife hazards at the aerodrome and the risks associated with those hazards.

Pavement Strength and Overload Operations.

12.6.24. The aerodrome operator shall not permit overloading of pavements beyond the design capacity particularly when it is observed that the pavements are exhibiting signs of distress or failure. However occasional minor overload on serviceable pavements is acceptable provided the following specifications are adhered to :

(*a*) for flexible pavements, occasional movements by aircraft with Aircraft Classification Number (ACN) not exceeding 10 per cent above the reported Pavement Classification Number (PCN) should not adversely affect the pavement ;

(*b*) for rigid and composite pavements, in which a rigid pavement layer provides a primary element of the structure, occasional movements by aircraft with ACN not exceeding 5 per cent above the reported PCN should not adversely affect the pavement ;

(*c*) if the pavement structure is unknown, the 5 per cent limitation should apply ; and

(*d*) the annual number of overload movements should not exceed approximately 5 per cent of the total annual aircraft movements.

12.6.25.—(*a*) The aerodrome operator shall implement a quality control programme as prescribed in the Aerodrome Standards Manual. Quality Control Programme.

(*b*) The quality control programme shall include :

(*i*) the maintenance of Aerodrome installations, equipment and terminal building facilities ;

(*ii*) the delivery of quality service to passengers and aircraft operators ; and

(*iii*) the measurement of the quality of service.

(*c*) The aerodrome operator shall pay attention to :

(*i*) departing and arriving passengers and baggage clearing time ;

(*ii*) the provision of flight information to Aerodrome users ;

(*iii*) sanitation ;

(*iv*) directional signs ;

(*v*) lighting and ambient temperature conditions.

12.6.26. The Aerodrome operator shall ensure the implementation of its approved Environmental Management Plan. The Plan shall include : Environmental Protection.

(*a*) measures of handling of all types of wastes : oil and grease spills, air, noise and water pollution;

(*b*) regular environmental audit by independent qualified experts to ensure the appropriateness and compliance with the environmental management plan ; and

(*c*) records showing compliance with extant environmental protection laws, regulations, guidelines and directives of relevant government agencies. The Aerodrome Operator shall make such records available to the Authority whenever requested.

12.6.27. The aerodrome operator shall : Removal of Disabled Aircraft.

(*a*) establish and implement a disabled aircraft removal plan as prescribed in Chapter 13 Section 13.2.3 of the Aerodrome Standards Manual ;

(*b*) designate an experienced and competent officer representing the Aerodrome operator to co-ordinate and liaise with ATS, the Accident Investigation Bureau, the Authority, the Aircraft operator, Customs and Immigration Departments if the aircraft is involved in international operation, and note that the aircraft is the property of the Aircraft operator and his or her insurers and that the task of moving the aircraft is the responsibility of the Aircraft operator or owner ;

(*c*) provide the capability of removing the disabled aircraft by following his or her plan for supplying of equipment, for dealing with nominated agents acting on behalf of each operator at the Aerodrome and local contractors capable of facilitating the aircraft removal operations ;

(*d*) make available a mobile office for the aircraft removal operation with communication links with ATS ;

(*e*) secure the scene of the incident or accident with security personnel ;

(*f*) keep records of all events, and photographs of the scene.

Handling and Storage of Aviation Fuel/Ground servicing of aircraft.

12.6.28.—(*a*) Each aerodrome operator shall maintain standards authorized by the Authority for protecting against fire and explosions in storing, dispensing, and otherwise handling fuel on the aerodrome. These standards shall cover facilities, procedures, and personnel training and shall address at least the following :

(1) Bonding.

(2) Public protection.

(3) Control of access to storage areas.

(4) Fire safety in fuel farm and storage areas.

(5) Fire safety in mobile fuelers, fueling pits, and fueling cabinets.

(6) Training of fueling personnel in fire safety in accordance with paragraph (*d*) of this section.

(7) The fire code of the public body having jurisdiction over the aerodrome.

(*b*) Each aerodrome operator shall require all fueling agents operating on the aerodrome to comply with, the standards established under paragraph (a) of this section and shall perform reasonable surveillance of all fueling activities on the aerodrome with respect to those standards.

(*c*) Each aerodrome operator shall inspect the physical facilities of each aerodrome tenant fueling agent at least once every 3 consecutive months for compliance with paragraph (*a*) of this section and maintain a record of that inspection for at least 12 consecutive calendar months.

(*d*) Each aerodrome operator shall provide fire extinguishing equipment suitable for at least initial intervention in the event of a fuel fire and personnel trained in its use shall be readily available during the ground servicing of an aircraft and there shall be a means of quickly summoning the rescue and fire fighting service in the event of a fire or major fuel spill.

(*e*) During aircraft refueling operations while passengers are embarking, on board or disembarking, ground equipment shall be positioned so as to allow :

(1) the use of a sufficient number of aircraft exits for expeditious evacuation ; and

(2) a ready escape route from each of the exits to be used in an emergency.

(*f*) The training required in paragraph (*a*)(6) of this section shall include at least the following :

(*i*) At least one supervisor with each fueling agent shall have completed an aviation fuel training course in fire safety that is authorized by the Authority. Such an individual shall be trained prior to initial performance of duties, or enrolled in an authorized aviation fuel training course that should be completed within 90 days of initiating duties, and receive recurrent instruction at least every 24 consecutive calendar months.

(*ii*) All other employees who fuel aircraft, accept fuel shipments, or otherwise handle fuel shall receive at least initial on-the-job training and recurrent instruction every 24 consecutive calendar months in fire safety from the supervisor trained in accordance with paragraph (*f*)(*i*) of this section.

(*e*) Each aerodrome operator shall obtain a written confirmation once every 12 consecutive calendar months from each fueling agent that the training required by paragraph (*d*) of this section has been accomplished. This written confirmation shall be maintained for 12 consecutive calendar months and when requested, made available to the Authority for inspection.

(*f*) Unless otherwise authorised by the Authority, each aerodrome operator shall require each fueling agent to take immediate corrective action whenever the aerodrome operator becomes aware of non-compliance with a standard required by paragraph (*b*) of this section. The certificate holder shall notify the Authority immediately when non-compliance is discovered.

12.7. USE OF HELIPORTS

12.7.1. GENERAL.

12.7.1.1. This section shall apply to the certification and operation of heliports in Nigeria with the exception of military heliports. Applicability.

12.7.2.—(*a*) The Minister may approve the establishment and development of heliport anywhere in Nigeria ; Establishment of Heliports in Nigeria.

(*b*) Roads, approaches, apparatus, equipment, buildings and other accommodations in connection to such heliports shall be maintained by the owners in conformity with these regulations and any other requirement as may be prescribed by the Authority from time to time.

12.8.1.—(*a*) No person or corporate entity shall commence construction or reconstruction of an heliport without approval of the Authority. Design/ Operation of Heliports.

(*b*) Pursuant to Regulation 12.8.1(*a*), the Heliport operator shall submit to the Authority the following information for assessment :

(*i*) heliport layout and Markings, lights and signs plans ;

(*ii*) architectural drawings of the terminal and other operational buildings.

(*c*) No person shall operate a heliport in Nigeria (mobile or fixed) for the take-off and landing of helicopters engaged in flights for the purpose of public transport unless such a person is a holder of a Heliport or Aerodrome Certificate granted under these Regulations.

Restrictions/ Prohibitions.

12.8.2.—(*a*) Except with the approval by the Authority, no helicopter shall operate at a heliport.

(*b*) No heliport operator operate in the night except for emergency purposes granted by the Authority.

(*c*) Subject to the approval, the Authority will restrict or prohibit flights at any heliport at which aviation facilities for emergency night flights are lacking; or where the terrain, landing surface conditions or other objects in the vicinity of the heliport could cause a hazard to the operation of helicopters.

(*d*) The Authority shall restrict or prohibit operation at an aerodrome either absolutely or subject to any exceptions or conditions that the Authority shall specify, if the restriction is necessary for aviation safety and/or in the public interest.

Exemptions.

12.9.—(*a*) The Authority may exempt, in writing, a heliport operator from complying with specific provisions of these Regulations.

(*b*) The exemption process shall be in accordance with Part 1.4.

(*c*) An exemption is subject to the heliport operator complying with the conditions and procedures specified by the Authority in the Heliport Certificate as being necessary in the interest of safety.

(*d*) Deviation from these Regulations and the conditions and procedures referred to in (c) above shall be set out in an endorsement on the Aerodrome Certificate and reported in the Aeronautical Information Publication (AIP).

Heliport Certification.

12.10. The five phases for heliport certificate approval are :

(*i*) expression of interest by an intending applicant for an heliport certificate ;

(*ii*) assessment of the formal application including evaluation of the heliport manual ;

(*iii*) assessment of the heliport facilities and equipment ;

(*iv*) issuance or refusal of a heliport certificate ; and

(*v*) Publication of the certified status of a heliport and the required details in the AIP.

NOTE : Details of the certification process is contained in the advisory circular, NCAA-AC-ARD002, on certification of aerodrome

12.10.1.—(*a*) A person shall not operate a Heliport if the Heliport is not certified by the Authority.

Requirement to hold Heliport Certificate.

(*b*) The operator of an heliport intended for public use shall be in possession of an heliport certificate. This also applies to heliports owned by corporate entities engaged in business activities.

12.10.2. APPLICATION FOR HELIPORT CERTIFICATE.

12.10.2.1. The Heliport operator shall submit the following to the Authority for acceptance/approval :

Application for Heliport Certificate.

(*a*) An application for the issuance of Heliport Certificate shall be made to the Authority in the appropriate form as prescribed by the Authority. The application shall include :

(*i*) the Heliport Manual and Statement of compliance demonstrating the Heliport Operator's Heliport Manual is in compliance with the relevant provisions of the Aerodrome Standards Manual ;

(*ii*) the plans of Heliport as specified in IS 12.11.3 including obstacle chart 'A' showing details of obstructions marked/lighted ;

(*iii*) security clearance from the Federal Government ;

(*iv*) written approval from the town planning authority where applicable ;

(*v*) Environmental Impact Assessment approval from the Ministry of Environment ;

(*vi*) proof of payment of the appropriate fee prescribed by the Authority ;

(*vii*) adequate insurance cover ; and

(*viii*) particulars of non-compliance with, or deviations from the standards prescribed in Nig. CARs Part 12 and/or Aerodrome Standards Manual (ASM).

12.10.3. The Authority may approve the application and accept the Heliport Manual of the applicant for a Heliport Certificate subject to the provisions in this section and grant a Heliport Certificate to an applicant if :

Grant of Heliport Certificate.

(*a*) the Heliport facilities and equipment are in accordance with the standards specified in Chapter 15 of the Aerodrome Standards Manual ;

(*b*) the heliport manual prepared for the applicant's heliport accurately describes the facilities, services and equipment at the aerodrome ;

(*c*) the Heliport operating procedures make satisfactory provision for the safety of helicopters ;

(*d*) the applicant would, if granted a certificate, have the necessary competence, experience and resources to operate and maintain the Heliport ;

(*e*) an acceptable Safety Management System is in place at the Heliport.

Refusal to grant Heliport Certificate.

12.10.4. If the Authority refuses to grant a Heliport Certificate to an applicant, the Authority shall give the applicant notice of the refusal, and the reasons for it, not later than 14 days from the date of refusal.

Duration of Heliport Certificate.

12.10.5. A Heliport Certificate shall remain in force for a period of three (3) years unless suspended or cancelled by the Authority.

Renewal of Heliport Certificate.

12.10.6. A Heliport operator shall ensure that renewal of his or her Heliport Certificate is commenced not less than 90 days to the date of expiration of his or her certificate.

Suspension of Heliport Certificate by the Authority.

12.10.7.—(*a*) The Authority may by written notice suspend the Heliport Certificate if the heliport facilities, operations, or maintenance are not of the standard necessary for the safety of helicopter and air navigation or if :

(1) the Heliport operator's safety management system is found to be inadequate ;

(2) it is in the interest of operational safety ;

(3) all other means for timely correction of the unsafe condition or ensuring safe aircraft operations have not yielded the required results ;

(4) the technical proficiency or qualifications of the Heliport operator to perform the duties to meet the critical safety requirements in accordance with the regulations are found inadequate ;

(5) the operator resists or is unwilling to take action to correct or mitigate the condition affecting aviation safety ; or

(6) the operator fails to perform an already agreed upon corrective action and suspension of the certificate is the last resort to avoid unsafe operations in the Heliport Movement Area.

(*b*) The Authority shall suspend a Heliport Certificate if the certificate is transferred to a third party without the consent of the Authority or if any conditions of the certificate have been breached ;

(*c*) Before suspending a Heliport Certificate, the Authority shall :

(1) give to the holder a show cause notice that :

(*i*) sets out the facts and circumstances that, in the opinion of the Authority, would justify the suspension ; and

(*ii*) invites the holder to show cause, in writing, within 14 days after the date of the notice, why the certificate should not be suspended.

(2) The Authority shall take into account any written submission that the holder makes to the Authority within the time allowed.

Revocation of Heliport Certificate by the Authority.

12.10.8.—(*a*) The Authority may by written notice revoke the Heliport Certificate if :

(1) the Heliport operator is incapable or unwilling to carry out corrective action or has committed/repeated serious violations ;

(2) the Heliport operator has demonstrated a lack of responsibility, such as deliberate and flagrant acts of non-compliance or falsification of records jeopardizing aviation safety ; or

(3) the Heliport operator has made it convincingly clear that the continued operation of the aerodrome will be detrimental to the public interest.

12.10.9. The Authority, when granting the Heliport Certificate shall endorse the conditions for the type and use of the heliport and other details as contained in the Heliport Certificate. Endorsement of Condition on Heliport.

12.10.10. The Authority may amend a Heliport Certificate when : Certificate amendment of Heliport Certificate.

(1) there is a change in the ownership or management of the heliport ; or

(2) there is a change in the use or operation of the heliport ; or

(3) there is a change in the boundaries of the heliport ; or

(4) the holder of a Heliport Certificate makes a request for an amendment.

12.10.11. The Authority may cancel a Heliport Certificate if the heliport operator voluntarily gives notice, in writing, to surrender his or her Heliport Certificate : Voluntary Surrender of Heliport Certificate.

(*a*) The Heliport Certificate holder shall give the Authority 90 days written notice of the date on which the certificate is to be surrendered in order that suitable action can be taken ;

(*b*) The Authority shall cancel the certificate on the date specified in the notice.

12.10.12.—(*a*) The Authority may approve the transfer of a Heliport Certificate when : Transfer of Heliport Certificate.

(1) the current holder of the Heliport Certificate notifies the Authority in writing, at least 90 days before ceasing to operate the heliport ;

(2) the current holder of the Heliport Certificate notifies the Authority, in writing, of the name of the transferee ;

(3) the transferee applies to the Authority, in writing, within 90 days before the current holder of the Heliport Certificate ceases to operate the heliport ; and

(4) the requirements set out in sections 12.10.12(*a*) 1 - 3 above, are met by the transferee.

(*b*) If the Authority does not consent to the transfer of a Heliport Certificate, it shall notify the transferee, in writing, of its reasons not later than 30 days after making that decision.

12.10.13.—(*a*) The Authority may issue an interim heliport Certificate to the applicant referred to in section 12.10.13 or the proposed transferee of a Interim Heliport Certificate.

Heliport Certificate referred to in these Regulations authorising the applicant or transferee to operate an Heliport if the Authority is satisfied that :

(1) an Heliport Certificate in respect of the heliport will be issued to the applicant or transferred to the transferee as soon as the application procedure for the grant or transfer of an Heliport Certificate has been completed ; and

(2) the grant of the Interim Certificate is in the public interest and is not detrimental to aviation safety.

(*b*) An Interim Heliport certificate issued pursuant section to regulation 12.10.13(*a*) shall expire on ;

(1) the date on which the Heliport Certificate is issued or transferred, or

(2) the expiry date specified in the interim Heliport Certificate ; whichever is earlier.

(*c*) These regulations apply to an Interim Heliport Certificate in the same manner as they apply to a Heliport Certificate.

12.11. HELIPORT MANUAL

Preparation of Heliport Manual.

12.11.1. The Heliport operator shall have a manual, to be known as the Heliport Manual which shall :

(1) be typewritten or printed, and signed by the Heliport operator ;

(2) be in a format that is easy to revise ;

(3) have a system for recording the currency of pages and amendments thereto, including a page for logging revisions ; and

(4) be organised in a manner that will facilitate the preparation, review and acceptance/approval process ;

(5) contain all pertinent information concerning the heliport site, facilities, services, equipment, operating procedures, organization and management ;

(6) demonstrate that the heliport conforms to specifications of Aerodrome Standards Manual chapter 15 ;

(7) take the form and contains information as detailed in Nig.CARs Part 12, IS12.11.3

Location of Heliport Manual.

12.11.2.—(*a*) the Heliport operator shall provide the Authority with a complete and current copy of the Heliport Manual.

(*b*) the operator shall keep at least one complete and current copy of the Heliport Manual at the heliport and one copy at the operator's principal place of business if other than the Heliport.

(*c*) the heliport operator shall make the complete and current copy of the Heliport Manual available for inspection by authorised officers of the Authority.

12.11.3. The operator of the Heliport shall include the following particulars in a Heliport manual as provided in IS 12.11.3, to the extent that they are applicable to the heliport, under the following parts : Information to be included in the Heliport Manual.

PART 1. General information set out in Part 1 of the IS12.11.3 of these regulations on the purpose and scope of the Heliport manual ; the legal requirement for a Heliport certificate and a heliport manual as prescribed in the regulations; conditions for use of the Heliport; the aeronautical information services available and the procedures for their promulgation; the system for recording helicopter movements and the obligations of the heliport operator.

PART 2. Particulars of the Heliport site as set out in Part 2 of the IS 12.11.3 of these regulations.

PART 3. Particulars of the Heliport required to be reported to the aeronautical information service as set out in Part 3 of the IS 12.11.3 of these regulations.

PART 4. The Heliport operating procedures and safety measures as set out in Part 4 of the IS 12.11.3 of these regulations. This may include references to air traffic procedures such as those relevant to low visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the Heliport manual.

PART 5. *Safety Management System*

Details of the Heliport administration and the safety management system as set out in Part 5 of the IS 12.11.3 of these regulations.

12.11.4. The Heliport operator shall keep the copies of the Heliport Manual required by Regulation 12.11.1 in a printed form. Other copies may be kept in an electronic form. Form of Heliport Manual.

12.11.5.—(*a*) The Heliport Operator shall amend the Heliport Manual whenever it is necessary to maintain the accuracy of the information in the manual ; Amendments of Heliport Manual.

(*b*) The Authority may give written directives to the heliport operator requiring operator to amend the Heliport Manual if necessary ;

(*c*) The Heliport operator shall comply with the directive given to the operator by the Authority in paragraph (*b*).

12.11.6. The Heliport operator shall inform the Authority, in writing, of any amendment to the Heliport Manual within 30 days. Notice of Amendments.

12.11.7. The Authority shall approve the Heliport Manual and any amendments thereto, provided they meet the requirement of this section. The Authority's approval of the Heliport Manual.

Heliport Manual Controller.

12.11.8. The Heliport operator shall appoint a person to be the Heliport Manual Controller, whose functions shall include :

(*a*) keeping a record of persons who hold copies of the whole or part of the Heliport Manual ;

(*b*) updating of information in the manual given to those holders referred to in (*a*).

Heliport Design Requirements

12.12.—(*a*) An applicant for the issuance of a Heliport Certificate shall ensure that the heliport is provided with the following in the heliport manual :

(1) heliport data ;

(2) physical characteristics ;

(3) obstacle limitation surfaces ;

(4) visual aids ; and

(5) heliport services.

(*b*) The Heliport data, physical characteristics, obstacle limitation surfaces, visual aids, heliport services(including equipment and installations) provided at the Heliport shall comply with the appropriate Heliport design standards as prescribed in Chapter 15 of the Aerodrome Standards Manual.

12.13. Obligations Of The Heliport Operator

Compliance with standards and practices.

12.13.1. A Heliport operator shall comply with the standards and practices specified in the Aerodrome Standards Manual and these regulations.

Competence of Operational and Maintenance Personnel.

12.13.2.—(1) The Heliport operator shall employ an adequate number of qualified and skilled personnel to perform all critical activities for Heliport operation and maintenance.

(2) The operator shall train all operational and maintenance personnel who access safety areas and perform duties in compliance with the this Regulation. This training shall be completed prior to the initial performance of such duties and at least be retrained once every 3 years. The curriculum for initial and recurrent training shall include at least the following areas :

(*a*) heliport familiarisation, including marking, lighting, and signs system ;

(*b*) Procedures to access an operation/safety areas ;

(*c*) Heliport Emergency Plan ;

(*d*) heliport communications, including radio communication, where applicable, between the air traffic control tower and personnel, use of the common traffic advisory frequency if there is no air traffic control tower or the tower is not in operation, and procedures for reporting unsafe heliport conditions ;

(*e*) Duties required under the Heliport Manual and the requirements of this regulation ;

(*f*) In respect of Heliport maintenance, the training of personnel shall include the following areas as appropriate :

(*i*) Maintenance of the paved and unpaved areas ;

(*ii*) Heliport safety areas ;

(*iii*) Heliport drainage and fencing ;

(*iv*) Heliport Visual aids ;

(*v*) Passenger building facilities.

(3) The operator shall keep a record of all training completed by each individual. This shall, at a minimum, a description and date of training received and provide the Authority with a copy of this record, if requested ;

(4) The operator shall, as appropriate, comply with the following training requirements :

(*a*) Aircraft Rescue and Fire Fighting operational requirements ;

(*b*) heliport Inspection programme ;

(*c*) Wildlife Hazard management (where applicable).

(5) The heliport operator shall implement a programme to upgrade the competency of the personnel.

(6) The aerodrome operator shall submit to the Authority, training programmes for operational and maintenance personnel for approval.

Heliport operation and maintenance.

12.13.3.—(*a*) The Heliport operator shall maintain the Heliport in accordance with the procedures set out in the approved Heliport Manual ;

(*b*) To ensure the safety at the heliport, the Heliport operator shall :

(*i*) provide and maintain navigational visual aids which includes : wind direction indicators, lights, markings, markers and signs on the Heliport as prescribed in the Aerodrome Standards Manual.

(*ii*) maintain heliport surfaces and provide proof of friction tests on helideck (minimum friction coefficient value of 0.65).

(*iii*) carryout the 75kg hammer drop test on helideck safety net.

(*iv*) submit/implement a corrective action plan for mitigating the safety concerns at an aerodrome.

(*c*) carry out checks, preventive maintenance and repairs on the heliport facilities, using a maintenance programme ;

(*d*) co-ordinate work and ensure compliance with safety requirements for routine maintenance, minor or major construction or maintenance work at the Heliport in line with the procedures in Chapter 5 of the Aerodrome Standards Manual and related guidance material ;

(*e*) The Heliport operator shall co-ordinate with the ATS provider in order to be satisfied that appropriate air traffic services are available to ensure the safety of helicopters in the airspace associated with the Heliport. The co-ordination shall cover other areas related to safety such as aeronautical information service, meteorological service and aviation security.

Heliport Operator's Safety Management System.

12.13.4. The Heliport operator shall :

(*a*) implement a safety management system acceptable to the Authority as prescribed in Nig.CARs Part 20 ;

(*b*) require all users of the Heliport to comply with the requirements laid down by the Heliport operator with regard to safety at the Heliport ;

(*c*) arrange for an external audit and inspection programme for evaluating other users, including ground handling agencies and other organisations working at the heliport.

Passenger briefing room.

12.13.5. The heliport operator shall provide a briefing room for safety briefing.

Access to the Heliport.

12.13.6. The applicant for or holder of Heliport Certificate shall :

(*a*) allow access of personnel so authorised by the Authority to inspect, audit and test the Heliport facilities, services and equipment, inspect the Heliport operator's document and records in order to meet its continuing surveillance obligation and ensure safety of heliport operations.

(*b*) co-operate in conducting the activities referred to in paragraph (*a*) above.

Heliport Inspection.

12.13.7. The Heliport operator shall inspect the Heliport daily and as circumstances require to ensure aviation safety.

Obstacle Environment.

12.13.8. The Heliport operator shall :

(*a*) establish the obstacle limitation surfaces and meet the requirements for the surfaces and any obstacles that may affect them, as set out for Heliports in Chapter 15, section 15.4 of the Aerodrome Standards Manual.

(*b*) remove from the Heliport surface any obstruction that is likely to be hazardous to helicopter operation.

(*c*) notify the Authority prior to commencement of construction or alteration works.

(*d*) monitor and report to the Authority any erection of obstacles within the obstacle limitation surfaces to ensure the safety of airspace for helicopter operations.

12.13.9. The heliport operator shall : Public Protection and Heliport Security.

(*a*) provide public protection and Heliport security in accordance with Part 17 of these Regulations ;

(*b*) provide perimeter fence, road, barriers and doors with controlled access to prevent inadvertent and unauthorised entry of animals and human beings and where necessary provide security lighting on the perimeter fence ;

(*c*) affix signs and prohibition notices at the perimeter of security areas within the heliport.

12.13.10. The Heliport operator shall ensure the accuracy of the determination and reporting of Heliport related aeronautical data with emphasis on the following areas : Heliport Data.

(1) Adherence to accuracy and integrity requirements set forth in the Aerodrome Standards Manual ;

(2) Maintenance of integrity of aeronautical data and avoidance of corruption of data at all times ;

(3) Ensuring that data are measured or described as appropriate and should cover heliport reference point, elevation, final approach and take-off area (FATO), touchdown and lift-off area (TLOF) and declared distances and other required data items specified in the Aerodrome Standards Manual.

12.13.11. A Heliport operator shall adhere to the requirement to notify and report appropriately to the Authority, the air traffic service provider and pilots any condition that may affect aviation safety, within the specified time limits required by these Regulations. Notifying and Reporting.

12.13.12. The Heliport operator shall provide at least one final approach and take-off area (FATO), one touchdown and lift-off area (TLOF), helicopter clearway where necessary, safety areas, helicopter ground taxiways, air taxiways, air transit routes and apron with particular attention to the following : Physical Characteristics.

(*a*) class of helicopters the Heliport can serve ;

(*b*) local conditions such as elevation, temperature and visual or general meteorological conditions ; and

(*c*) the standards and specifications prescribed in section 15.5.3 of the Aerodrome Standards Manual.

12.13.13. The Heliport operator shall provide and maintain at least one wind direction indicator, markings and markers, heliport beacon, Visual approach slope indicator (HAPI and PAPI, APAPI) lights including approach lightings where desirable and practicable, aiming point lights, taxiway lights and floodlighting of obstacles in accordance with the requirements specified in Chapter 15, section 15.5.1,15.5.2, 15.5.3, of the Aerodrome Standards Manual. Visual Aids.

Rescue and Fire Fighting at Heliports.

12.13.14. The Heliport operator shall :

(*a*) determine the level of protection to be provided for rescue and fire fighting based on the over-all size of the largest helicopter that uses the heliport in accordance with heliport fire fighting category ;

(*b*) provide principal extinguishing agents (foam compound) meeting the minimum performance level B ;

(*c*) provide complimentary agents preferably dry chemical powder or carbon dioxide ;

(*d*) provide vehicles with a discharge rate of foam compound as prescribed in Chapter 15, section 15.6.1.4. of the Aerodrome Standards Manual ;

(*e*) provide rescue equipment commensurate with the level of helicopter operations ;

(*f*) equip the fire fighting unit with trained personnel, vehicle and equipment to achieve a response time not exceeding two minutes in optimum conditions of visibility and surface conditions ;

(*g*) provide rescue and fire fighting services as prescribed in Chapter 15, section 15.6.1 of the Aerodrome Standards Manual.

Heliport Emergency Management Systems.

12.13.15. The Heliport operator shall :

(*a*) establish procedures to ensure that all participants in any heliport emergency with allocated duties are familiar with and are properly trained for their assignments ;

(*b*) test the effectiveness of the emergency management system through periodic exercise including a full-scale heliport emergency exercise annually ;

(*c*) correct any deficiencies identified during any full-scale exercise and review his or her system with the aim of achieving improved efficiency and safety.

Aeronautical Studies.

12.13.16. The Heliport operator shall carry out aeronautical studies where necessary under the conditions, procedures and technical guidelines given in Chapter 2, section 2.1.4 of the Aerodrome Standards Manual and this section.

IMPLEMENTING STANDARDS (IS)

IS:12.4.2.— INFORMATION TO BE INCLUDED IN THE AERODROME MANUAL.

General.

1. General information includes the following :

(*a*) Purpose and scope of the Aerodrome Manual ;

(*b*) The legal requirement for an Aerodrome Certificate and an Aerodrome Manual as prescribed in these Regulation ;

(*c*) Conditions for use of a Public or Private Aerodrome; a statement to indicate that the Aerodrome shall at all times, when it is available for the take-off and landing of Aircraft, be also available to all persons on equal terms and conditions ;

(*d*) The available aeronautical information systems and procedures for its adoption ;

(*e*) The system for recording aircraft movements ; and

(*f*) Obligations of the Aerodrome Operator to the Authority including granting authorised personnel, access to the Aerodrome to carry out safety audit inspection, testing and to be responsible for notifying or reporting as prescribed in the Regulations ;

(*g*) Co-ordination Policy or Letters of Agreement between AIS and Aerodrome Operator on areas of co-ordination including but not limited to Aerodrome Emergency Planning, Aerodrome Condition Reporting and Aerodrome Vehicle Operations.

Particulars of the Aerodrome Site.

2. General information, including the following :

(*a*) a plan of the Aerodrome showing the main Aerodrome facilities for the operation of the Aerodrome including, particularly, the location of each Wind Direction Indicator ;

(*b*) a plan of the Aerodrome showing the Aerodrome boundaries ;

(*c*) a plan showing the distance of the Aerodrome from the city or other populous area, and the location of any Aerodrome facilities and equipment outside the boundaries of the Aerodrome ; and

(*d*) particulars of the title of the Aerodrome site. If the boundaries of the Aerodrome are not defined in the title documents, particulars of the title to or interest in the property on which the Aerodrome is located and a plan showing the boundaries and position of the Aerodrome.

3. PARTICULARS OF THE AERODROME REQUIRED TO BE REPORTED TO THE AERONAUTICAL INFORMATION SERVICE (AIS)

General Information.

3.1.—(*a*) the name of the Aerodrome ;

(*b*) the location of the Aerodrome ;

(*c*) the geographical coordinates of the Aerodrome reference point determined in terms of the World Geodetic System—1984 (WGS-84) reference datum ;

(*d*) the Aerodrome elevation and geoid undulation ;

(*e*) the elevation of each threshold and geoid undulation, the elevation of the runway end and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway ;

(*f*) the Aerodrome reference temperature ;

(*g*) details of the Aerodrome beacon ; and

(*h*) the name of the Aerodrome operator and the address and telephone number at which the Aerodrome operator may be contacted at all times.

3.2. General information, including the following :

Aerodrome Dimensions and Related Information.

(*a*) runway - true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone ;

(*b*) length, width and surface type of strip, runway end safety areas, stopways ;

(*c*) length, width and surface type of taxiways ;

(*d*) apron surface type and aircraft stands ;

(*e*) clearway length and ground profile ;

(*f*) visual aids for approach procedures, viz, approach lighting type and visual approach slope indicator system (PAPI/APAPI and T-VASIS/AT-VASIS) ; marking and lighting of runways, taxiways, and aprons ; other visual guidance and control aids on taxiways (including runway holding positions, intermediate holding positions and stop bars) and aprons, location and type of visual docking guidance system ; availability of standby power for lighting ;

(*g*) the location and radio frequency of VOR Aerodrome checkpoints ;

(*h*) the location and designation of standard taxi routes ;

(*i*) the geographical co-ordinates of each threshold ;

(*j*) the geographical co-ordinates of appropriate taxiway centre line points ;

(*k*) the geographical co-ordinates of each aircraft stand ;

(*l*) the geographical coordinates and the top elevation of significant obstacles in the approach and take-off areas, in the circling area and in the vicinity of the Aerodrome. (This information may best be shown in the form of charts such as those required for the preparation of Aeronautical Information Publications, as specified in Annexes 4 and 15 to the Convention) ;

(*m*) pavement surface type and bearing strength using the Aircraft Classification Number - Pavement Classification Number (ACN-PCN) method ;

(*n*) one or more pre-flight altimeter check locations established on an apron and their levation ;

(*o*) declared distances : Take-Off Run Available (TORA), Take-Off Distance Available (TODA), Accelerate-Stop Distance Available (ASDA), Landing Distance Available (LDA) ;

(*p*) disabled aircraft removal plan : the telephone/telex/facsimile numbers and email address of the Aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the movement area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which the Aerodrome is equipped to remove ; and

(*q*) rescue and fire-fighting : the level of protection provided, expressed in terms of the category of the rescue and fire-fighting services, which should be in accordance with the longest aeroplane normally using the Aerodrome and the type and amount of extinguishing agents normally available at the Aerodrome.

NOTE : The accuracy of the information in Paragraph 3 above is critical to aircraft safety. Information requiring engineering survey and assessment should be gathered or verified by qualified technical persons.

4. PARTICULARS OF THE AERODROME OPERATING PROCEDURES AND SAFETY MEASURES

Aerodrome Reporting.

4.1. Particulars of the procedures for reporting any changes to the Aerodrome information set out in the AIP and procedures for requesting the issue of NOTAMs, including the following :

(*a*) arrangement for reporting any changes to the Authority and recording the reporting of changes during and outside the normal hours of Aerodrome operations ;

(*b*) the names and roles of persons responsible for notifying the changes, and their telephone numbers during and outside the normal hours of Aerodrome operations ; and

(*c*) the address and telephone numbers, as provided by the Authority of the place where changes are to be reported to the Authority.

Access to the Aerodrome Movement Area.

4.2. Particulars of the procedures that have been developed and are to be followed in coordination with the agency responsible for preventing unlawful interferences in civil aviation at the Aerodrome and for preventing unauthorised entry of persons, vehicles, equipment, animals or other things into the movement area, including the following :

(*a*) the role of the Aerodrome operator, the aircraft operator, Aerodrome fixed base operators, the Aerodrome security entity, the Authority and other government departments, as applicable ; and

(*b*) the names and roles of the personnel responsible for controlling access to the Aerodrome, and the telephone numbers for contacting them during and after working hours.

Aerodrome Emergency Plan.

4.3. Particulars of the Aerodrome emergency plan, including the following :

(*a*) plans for dealing with emergencies occurring at the Aerodrome or in its vicinity, including the malfunction of aircraft in flight ; structural fire; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft ; and incidents on the aerodrome covering "during the emergency" and "after the emergency" considerations ;

(*b*) details of test for Aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests ;

(*c*) details of exercises to test emergency plans, including the frequency of those exercises ;

(*d*) a list of organisations, agencies and persons of authority, both on and off aerodrome, for site roles; their telephone and facsimile numbers, e-mail and SITA addresses and the radio frequencies of their offices ;

(*e*) the establishment of an Aerodrome emergency committee to organize training and other preparations for dealing with emergencies ; and

(*f*) the appointment of an on-scene commander for the overall emergency operation.

Rescue and Fire-fighting.

4.4. Particulars of the facilities, equipment, personnel and procedures for meeting the rescue and fire-fighting requirements, including the names and roles of the persons responsible for dealing with the rescue and fire-fighting services at the Aerodrome.

NOTE : This subject should also be covered in appropriate detail in the Aerodrome Emergency Plan.

Inspection of the Aerodrome Movement Area and Obstacle Limitation Surface by the Aerodrome Operator.

4.5. Particulars of the procedures for the inspection of the Aerodrome movement area and obstacle limitation surfaces, including the following :

(*a*) arrangement for carrying out inspections, including runway friction and water-depth measurements on runways and taxiways, during and outside the normal hours of Aerodrome operations ;

(*b*) arrangement and means of communicating with the Aerodrome Air Traffic Control unit during an inspection ;

(*c*) arrangements for keeping an inspection logbook, and the location of the logbook ;

(*d*) details of inspection intervals and times ;

(*e*) inspection checklist ;

(*f*) arrangement for reporting the results of inspections and for taking prompt follow-up actions to ensure correction of unsafe conditions ;

(*g*) the names and roles of persons responsible for carrying out inspections, and their telephone number during and after working hours ;

(*h*) procedure to monitor and report the condition of movement areas ;

(*i*) procedure to report the presence of water on runway ; and

(*j*) procedures to report slippery runway condition.

Visual Aids and Aerodrome Electrical Systems

4.6. Particulars of the procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers and Aerodrome electrical systems, including the following :

(*a*) arrangement for carrying out inspections during and outside the normal hours of Aerodrome operation, and the checklist for such inspection ;

(*b*) arrangements for recording the results of inspections and for taking follow up action to correct deficiencies ;

(*c*) arrangements for carrying out routine maintenance and emergency maintenance ;

(*d*) arrangements for secondary power supplies, if any, and, if applicable, the particulars of any other method of dealing with partial or total system failure ;

(*e*) the names and roles of the persons responsible for the inspection and maintenance of the lighting, and the telephone numbers for contacting those persons during and after working hours ;

(*f*) sign plan and Surface Movement Guidance and Control Systems (SMGCS) plan approved by the Authority ;

(*g*) procedure to prevent aircraft from entering permanently closed runways and Taxiways.

Maintenance of the Movement Area.

4.7. Particulars of the facilities and procedures for the maintenance of the movement area, including :

(*a*) arrangements for maintaining the paved areas ;

(*b*) arrangements for maintaining the unpaved runways and taxiways ;

(*c*) arrangements for maintaining the runway and taxiway strips ; and

(*d*) arrangements for the maintenance of Aerodrome drainage.

Aerodrome Works—Safety.

4.8. Particulars of the procedures for planning and carrying out construction and maintenance work, safely (including work that may have to be carried out at short notice) on or in the vicinity of the movement area which may extend above an obstacle limitation surface, including the following :

(*a*) arrangements for communicating with the Aerodrome Air Traffic Control unit during the progress of such work ;

(*b*) the names, telephone numbers and roles of the persons and organisations responsible for planning and carrying out the work, and arrangements for contacting those persons and organisations at all times ;

(*c*) the names and telephone numbers, during and after working hours, of the Aerodrome fixed-based operators, ground handling agents and aircraft operators who are to be notified of the work ;

(*d*) a distribution list for work plans, if required ;

(*e*) procedure to return a runway to operational status after pavement overlay.

Apron Management.

4.9. Particulars of the apron management procedures, including the following :

(*a*) arrangements between Air Traffic Control and the apron management units ;

(*b*) arrangements for allocating aircraft parking positions ;

(*c*) arrangements for initiating engine start and ensuring clearance of aircraft push-back ; and

(*d*) marshalling service ;

(*e*) leader (van) service.

Apron Safety Management.

4.10. Procedures to ensure apron safety, including :

(*a*) protection from jet blast ;

(*b*) enforcement of safety precautions during aircraft refuelling operations ;

(*c*) apron sweeping ;

(*d*) apron cleaning ;

(*e*) arrangements for reporting incidents and accidents on an apron ; and

(*f*) arrangements for auditing the safety compliance of all personnel working on the apron.

(*g*) management of ground support equipment associated with aircraft handling and loading operations which include, but not limited to the following :

(*i*) Operation of passenger loading bridge

(*ii*) Aircraft fuelling

(*iii*) Aircraft push back

(*iv*) Aircraft power back

(*v*) Aircraft towing

(*vi*) Aircraft power-in arrival and power-out departure

(*vii*) Aircraft marshalling

4.11. Particulars of the procedure for the control of surface vehicles operating on or in the vicinity of the movement area, including the following : Airside Vehicle Control.

(*a*) details of the applicable traffic rules (including speed limits and the means of enforcing the rules) ; and

(*b*) the method of issuing driving permits for operating vehicles in the movement area.

4.12. Particulars of the procedures to deal with the danger posed to aircraft operations by the presence of bird or mammals in the Aerodrome flight pattern or movement area, including the following : Wildlife Hazard Management.

(*a*) arrangements for assessing wildlife hazards ;

(*b*) arrangements for implementing wildlife control programmes ; and

(*c*) the names and roles of the persons responsible for dealing with wildlife hazards, and their telephone numbers during and after working hours.

4.13. Particulars setting out the procedures for : Obstacle Control.

(*a*) monitoring the obstacle limitation surfaces and Type A Chart for obstacle in the take-off surface ;

(*b*) controlling obstacles within the authority of the operator ;

(*c*) monitoring the height of buildings or structures within the boundaries of the obstacle limitation surfaces ;

(*d*) controlling new developments in the vicinity of Aerodromes ; and notifying the Authority of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including amendment of the AIS publications.

4.14. Particulars of the procedures for removing a disabled aircraft on or adjacent to the movement area, including the following : Removal of Disabled Aircraft.

(*a*) the roles of the Aerodrome operator and the holder of the aircraft certificate of registration;

(*b*) arrangements for notifying the holder of the certificate of registration ;

(*c*) arrangements for liaising with the Aerodrome Air Traffic Control unit ;

(*d*) arrangements for obtaining equipment and personnel to remove the disabled aircraft ; and

(*e*) the names, role and telephone numbers of persons responsible for arranging for the removal of disabled aircraft.

4.15. Particulars of the procedures for the safe handling and storage of hazardous material on the Aerodrome, including the following : Handling of Hazardous Materials.

(*a*) arrangements for special areas on the Aerodrome to be set up for the storage of inflammable liquids (including aviation fuels) and any other hazardous materials ; and

(*b*) the method to be followed for the delivery, storage, dispensing and handling of hazardous materials.

NOTE : Hazardous materials include inflammable liquids and solid, corrosive liquids, compressed gases and magnetized or radioactive materials. Arrangements for dealing with the accidental spillage of hazardous materials should be included in the Aerodrome Emergency Plan.

Low-Visibility Operations.

4.16. Particulars of procedures to be introduced for low-visibility operations, including the measurement and reporting of runway visual range as and when required, and the names and telephone numbers, during and after working hours, of the persons responsible for measuring the runway visual range.

Protection of Sites for Radar and Navigational Aids.

4.17. Particulars of the procedures for the protection of sites for radar and radio navigational aids located on the Aerodrome to ensure that their performance will not be degraded, including the following :

(*a*) arrangements for the control of activities in the vicinity of radar and navaids installations ;

(*b*) arrangements for ground maintenance in the vicinity of these installations ; and

(*c*) arrangements for the supply and installation of signs warning of hazardous microwave radiation.

NOTE 1 : In writing the procedures for each category, clear and precise information should be included on :

when, or in what circumstances, an operating procedure is to be activated; how an operating procedure is to be activated ; actions to be taken ; the persons who are to carry out the actions ; and the equipment necessary for carrying out the actions, and access to such equipment.

NOTE 2 : If any of the procedures specified above are not relevant or applicable, the reason should be given.

Aerodrome administration and Safety Management System.

5. *Aerodrome Administration.*

Particulars of the aerodrome administration, including the following :

(1) an aerodrome organisational chart showing the names and positions of key personnel, including their responsibilities ;

(2) the name, position and telephone number of the person who has overall responsibility for aerodrome safety ; and

(3) aerodrome committees.

Particulars of the safety management system established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance, the essential features being :

Safety Management System (*SMS*).

(1) the safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process ;

(2) the structure or organisation of the SMS, including staffing and the assignment of individual and group responsibilities for safety issues ;

(3) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risks to as low a level as is reasonably practicable keeping always in view the requirements of the Standards and Recommended Practices in Volume I of Annex 14 to the Convention on International Civil Aviation, and the national regulations, standards, rules or orders ;

(4) SMS implementation, including facilities, methods and procedures for the effective communication of safety messages and the enforcement of safety requirements ;

(5) a system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures programme) ;

(6) measures for safety promotion and accident prevention and a system for risk control involving analysis and handling of accidents, incidents, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring ;

(7) the internal safety audit and review system detailing the systems and programmes for quality control of safety ;

(8) the system for documenting all safety-related aerodrome facilities as well as aerodrome operational and maintenance records, including information on the design and construction of aircraft pavements and aerodrome lighting. The system should enable easy retrieval of records including charts ;

(9) staff training and competency, including the review and evaluation of the adequacy of training provided to staff on safety-related duties and of the certification system for testing their competency ; and

(10) the incorporation and enforcement of safety-related clauses in the contracts for construction work at the aerodrome.

Memorandum of Understanding with Designated Service Providers.

6.—(*a*) A copy of memorandum of understanding signed with FAAN, and a copy of approved airport security programme detailing the arrangement in place at the airport to ensure optimum implementation of aviation security measures.

(*b*) A copy of memorandum of understanding or agreement signed with NAMA setting out the technical terms under which the services are to be provided.

(*c*) A copy of memorandum of understanding or agreement signed with NIMET setting out the technical terms under which the services are to be provided.

Extinguishing Agents and Equipment.

IS: 12.6.16.6 (*a*)—(*a*) The principal extinguishing agent shall be a foam suitable for the type of equipment to be used, and

(1) the foams provided as principal extinguishing agents, and the date acquired ;

(2) the foam concentrates of different types or from a different manufacturer shall not be mixed except where it has been established that they are completely interchangeable and compatible ; and

(3) the quantity of foam concentrates provided on vehicles for foam production shall be in proportion to the quantity of water provided and the foam concentrate selected.

(*b*) The complementary extinguishing agent shall be a dry chemical powder suitable for the type of equipment to be used, and compatible with the foam or foams selected for use as the principal extinguishing agent at the airport or aerodrome ;

(*c*) The amount of foam concentrate on board vehicles shall be sufficient for at least two full loads of the required quantity of water ;

(*d*) Sufficient quantity of foam concentrate shall be held in reserve to allow for four complete discharges, at the correct percentage, of the water requirement for the critical category published. Part of this reserve may be carried on the fire-fighting vehicles ;

(*e*) A reserve supply of complementary extinguishing agent equivalent to 200 per cent of the quantity of complementary agent requirement for the category published shall be maintained at the airport or aerodrome. The reserve shall include sufficient propellant gas to utilize this reserve complementary agent ;

(*f*) The turrets and reel mounted hand lines designed for aircraft fire-fighting on vehicle(s) equipped with foam fire-fighting equipment shall be tested at least annually, at all pre-set discharge flow rates, to ensure that the correct discharge rate is being delivered, and the required foam physical characteristics are being met ;

(*g*) The equipment delivering the complementary extinguishing agent shall be tested at least annually to ensure that the correct discharge rate and reach is being delivered.

IS:12.6.16.10 (*b*).—(*a*) KNOWLEDGE AND SKILL TRAINING —Training shall be provided in the following areas :

Training of Personnel.

(1) *Generic Training*

(*i*) AFF Vehicles and Equipment ;

(*ii*) Emergency Communications Systems including Fire Alarms ;

(*iii*) Fire-Fighting Personnel Safety ;

(*iv*) Fire Chemistry ;

(*v*) Extinguishing Agents ;

(*vi*) Portable Fire Extinguishers ;

(*vii*) Fire Hoses, Nozzles, Turrets, and Other Appliances Available for Fire Fighting ;

(*viii*) Fire-fighting Operations ;

(*ix*) Emergency Aircraft Evacuation Assistance ;

(*x*) Aircraft Cargo Hazards ;

(*xi*) Live-Fire Training ;

(*xii*) First Aid.

(2) *Site-Specific Training*

(*i*) Familiarisation with the aerodrome where the fire fighter will be carrying out fire-fighting duties ;

(*ii*) Familiarisation with the types of aircraft regularly operating at the airport or aerodrome where the fire fighter will be carrying out fire-fighting duties ; and

(*iii*) Familiarisation with fire-fighting duties under the Aerodrome Emergency Response Plan for the aerodrome where the fire fighter will be carrying out fire-fighting duties.

(*b*) LEVEL OF ACHIEVEMENT TO BE ATTAINED

(1) *Generic Training*

(*i*) With respect to AFF vehicles and equipment, the candidate shall be able to :

(*a*) Describe each tool and item of equipment on each aircraft fire-fighting vehicle at the airport or aerodrome, including a description of its designated use, required maintenance, proper storage; and demonstrate its use ;

(*b*) Demonstrate knowledge and skills relative to routine inspection and maintenance of AFF vehicles as required by the manufacturer's specifications and maintenance manuals ; and (*c*) Demonstrate the knowledge and skill required to operate AFF vehicles, including manual back-up systems.

(*ii*) With respect to emergency communications systems, including fire alarms, the candidate shall be able to :

(*a*) Identify the methods and procedures to be followed when an emergency alarm is received ;

(*b*) Identify radio frequencies and channels assigned for use by the aerodrome to control vehicular traffic ;

(*c*) Identify radio frequencies and channels assigned for use by the aerodrome Emergency Operations Centre ;

(*d*) Identify radio frequencies and channels assigned for use by mutual aid organisations ;

(*e*) Identify radio frequencies and channels assigned for use by responding units and organisations ;

(*f*) Identify procedures concerning multiple alarms and mutual aid ;

(*g*) Demonstrate knowledge of the phonetic alphabet ;

(*h*) Demonstrate the use of all communication equipment utilized by the fire-fighting service ;

(*i*) Provide an initial status report on a simulated aircraft accident ; and

(*j*) Demonstrate standard hand signals used to communicate with aircrew personnel as it relates to aircraft fire fighting.

(*iii*) With respect to fire-fighting personnel safety, the candidate shall be able to :

(*a*) Identify the hazards associated with aircraft fire fighting ;

(*b*) Identify the hazards associated with aircraft and aircraft systems on personnel ;

(*c*) Identify potential stress effects on personnel involved in a mass-casualty response ;

(*d*) Identify the purpose and limitations of protective clothing ;

(*e*) Demonstrate donning protective clothing ;

(*f*) Demonstrate techniques for action in a fire situation where trapped or disoriented, or when in an hostile environment ;

(*g*) Identify the hazards associated with cut-in entries ;

(*h*) Describe the hazardous respiratory environments encountered in aircraft fire fighting ;

(*i*) Identify techniques for protection from communicable-disease hazards ;

(*j*) Describe the proper techniques for approaching aircraft while engines are running ;

(*k*) Identify the purpose of self-contained breathing apparatus (SCBA) ;

(*l*) Identify the components and operation of the SCBA provided ;

(*m*) Identify the limitations of the SCBA provided ;

(*n*) Demonstrate that the SCBA is in a safe operating condition for immediate use ;

(*o*) Don SCBA equipment while wearing protective clothing ;

(*p*) Use SCBA equipment in dense smoke, or a blacked out environment ;

(*q*) Change a team member's exhausted air supply cylinder with an air supply cylinder ;

(*r*) While wearing SCBA equipment, demonstrate those actions necessary in the event of one of the following emergency situations :

- activation of low-air alarm ;
- exhausted air supply ;
- regulator malfunction ;
- damage to face piece ;
- damage to low pressure hose ;
- damage to high pressure hose.

(*iv*) With respect to fire behaviour, the candidate shall be able to :

(*a*) Explain the fire tetrahedron ;

(*b*) Describe the phases of a fire ;

(*c*) Describe the main products of combustion ;

(*d*) Describe the three methods of heat transfer ;

(*e*) Describe the classes of fire and extinguishment methods ;

(*f*) Define flash point, ignition temperature, flashover, rollover, backdraft and explosion ; and

(*g*) Describe the various aviation fuels' characteristics with respect to fire behaviour and explosion hazard.

(*v*) With respect to extinguishing agents, the candidate shall be able to :

(*a*) Identify the extinguishing properties of each agent, including advantages and disadvantages ;

(*b*) Identify those agents used at the aerodrome ;

(*c*) Identify the locations of agents kept in inventory for vehicle re-supply ;

(*d*) State the quantity of each type of agent carried on each vehicle at the airport or aerodrome ; and

(*e*) Identify the preferred agent to use to suppress and extinguish fire in various case scenarios.

(*vi*) With respect to portable fire extinguishers, the candidate shall be able to :

(*a*) Identify the classification of fires as they relate to the use of fire extinguishers ;

(*b*) Identify each type of portable fire extinguisher by classification and rating ;

(*c*) Describe the agents' characteristics in the extinguishers used at the aerodrome ;

(*d*) Identify the limitations and operating characteristics of each type of portable fire extinguisher ;

(*e*) Identify the location of each portable fire extinguisher carried on each AFF vehicle used at the aerodrome ;

(*f*) Identify the appropriate extinguisher for a given class of fire from a group of different fire extinguishers ; and

(*g*) Operate the appropriate extinguisher on each class of fire.

(*vii*) With respect to fire hoses, nozzles, turrets and other appliances available for fire-fighting, the candidate shall be able to :

(*a*) Identify the location of each tool and item of equipment used at the aerodrome ;

(*b*) Identify the hazards associated with the use of each tool and item of equipment used at the aerodrome ;

(*c*) Demonstrate the proper procedures for use of each tool and item of equipment used at the aerodrome ;

(*d*) Describe the purpose of each hose, nozzle and adapter ;

(*e*) Describe the location of each hose, nozzle and adapter used by the fire-fighting unit at the aerodrome ;

(*f*) Describe the size and length of each hose carried on each AFF vehicle used at the airport or aerodrome ;

(*g*) Demonstrate the proper procedures for use of each hose, nozzle and adapter used at the airport or aerodrome ;

(*h*) Demonstrate the proper procedure to be used when advancing hose for fire attack ;

(*i*) Demonstrate the proper procedure to be used when laying hose to establish a re-supply of water ;

(*j*) Identify the primary purpose, agent capacity, water capacity, type of agent carried, agent discharge rate and range, personnel requirements, and response limitations for each AFF vehicle used at the airport or aerodrome ;

(*k*) Demonstrate the operation of handlines and vehicle-mounted discharge devices ; and

(*l*) Demonstrate the procedures for re-supply using a hydrant, structural vehicles, tank trucks and other vehicles for each AFF vehicle used at the airport or aerodrome.

(*viii*) With respect to fire-fighting operations, the candidate shall be able to :

(*a*) State the objective of aircraft fire fighting and the role of the firefighter in response to an aircraft emergency ;

(*b*) Describe fire-fighting tactics and evacuation of occupied aircraft ;

(*c*) Describe fire-fighting tactics of unoccupied aircraft ;

(*d*) Select a strategy and tactics for incident control and termination ;

(*e*) Perform fire-fighting tactics ;

(*f*) Explain the correct procedures for fighting three-dimensional fires ;

(*g*) Explain the correct procedures for fighting engine fires ;

(*h*) Describe the correct procedures for securing and maintaining a fire free egress route ;

(*i*) Describe the proper procedure to use when protecting an aircraft fuselage from fire exposure ;

(*j*) Describe the correct procedures to be used when providing protective streams for personnel ;

(*k*) Describe the hazards of a brake and wheel fire ;

(*l*) Describe the correct procedures to be used when fighting a brake and wheel fire ;

(*m*) Describe the correct procedures for controlling runoff from fire control operations and fuel spills ;

(*n*) Describe the correct procedures to be used to stabilize aircraft wreckage ;

(*o*) Describe the safety precautions for controlling fuel spills ;

(*p*) Describe grounding, bonding and hazards associated with static electricity related to aircraft ;

(*q*) Describe the hazards of a hydraulic fire ; and

(*r*) Describe the correct procedures to use in the event of fighting a hydraulic fire.

(*ix*) With respect to emergency aircraft evacuation assistance, the candidate shall be able to :

(*a*) Describe the correct procedures to use to protect evacuation points ;

(*b*) Identify those openings to use to gain entry for a given aircraft and situation ;

(*c*) Select the tools and equipment to use to gain entry for a given aircraft and situation;

(*d*) While wearing full protective clothing, demonstrate the ability to open:

(*i*) aircraft doors and exits, or

(*ii*) equivalent training doors and exits.

(*e*) Identify potential locations for break-in entry using reference materials, aircraft markings, or general guidelines for a given aircraft ; and

(*f*) Demonstrate the correct procedures to use for a victim search inside and outside the aircraft.

(*x*) With respect to aircraft cargo hazards, the candidate shall be able to :

(*a*) Identify the dangerous goods' classifications ;

(*b*) Identify the hazards indicated by each label ; and

(*c*) Identify the emergency procedures to be followed using the reference material in the event of a problem transporting hazardous materials at the airport or aerodrome.

(*xi*) With respect to live-fire training, in order that the agent is applied with proper technique and the fire extinguished, the candidate shall be able to :

(*a*) Extinguish a minimum of 9m^2 fuel fire with a minimum of a 45 kg dry chemical extinguisher ;

(*b*) Extinguish a minimum of 36m^2 fuel fire with an AFF vehicle hand line and appropriate agent ;

(*c*) Extinguish a minimum of 400m^2 fuel fire with AFF vehicle turrets and appropriate agent ;

(*d*) Extinguish a three-dimensional aircraft fuel fire with AFF vehicle hand lines and appropriate agent ;

(*e*) Control simulated engine and auxiliary power unit (APU) fires on aircraft with an AFF vehicle hand line or turrets and appropriate agent ; and

(*f*) Extinguish a simulated tire assembly fire with an AFF vehicle hand line and appropriate agent.

(*xii*) With respect to first aid, the candidate shall be able to :

(*a*) Identify primary and secondary life-threatening injuries ;

(*b*) Determine whether or not a victim has an open airway ;

(*c*) Locate an open airway in a person who is not breathing ;

(*d*) Recognize types and characteristics of external and internal bleeding ;

(*e*) Demonstrate techniques to control bleeding ;

(*f*) Perform cardiopulmonary resuscitation ;

(*g*) Recognize shock ;

(*h*) Recognize injuries to the skull, spine, chest, and extremities ;

(*i*) Recognize internal injuries ;

(*j*) Demonstrate procedures for moving patients ;

(*k*) Treat burns ; and

(*l*) Demonstrate knowledge concerning triage methodology.

(2) *Site-Specific Training*

(*i*) With respect to familiarisation with the aerodrome where the firefighter will be carrying out fire-fighting duties, the candidate shall be able to :

(*a*) Describe the runway and taxiway identification system ;

(*b*) Describe the movement area pavement markings, signs, and lighting ;

(*c*) Identify the various on-field aircraft navigation aids ;

(*d*) Cite aerodrome rules and regulations concerning vehicle movement and access ;

(*e*) Cite rules and regulations governing aerodrome security ;

(*f*) Locate a given point at the aerodrome on a grid map, or other standard map ;

(*g*) Identify terrain features using map symbols ;

(*h*) Identify and locate all emergency access roads and standard routes across the movement area ;

(*i*) Identify and locate all points giving access to the airside from non- operational areas ;

(*j*) Identify and locate all points giving access to portions of the critical fire-fighting access area, located outside the aerodrome perimeter ;

(*k*) Identify installations and features in the critical fire- fighting access area that present a hazard to vehicle response ;

(*l*) Identify installations and terrain features in the critical fire-fighting access area that limit vehicle response capability ;

(*m*) Identify the direction of travel of fuel in a simulated leak in the fuel distribution system applicable to the aerodrome ;

(*n*) Demonstrate the operation of fuel system valves and pumps to control the flow of fuel within the system applicable to the aerodrome ;

(*o*) Identify hazardous materials that are frequently stored or used on the aerodrome property ; and

(*p*) Identify elements of the aerodrome and surrounding water distribution system.

(*ii*) With respect to familiarisation with the types of aircraft regularly operating at the airport or aerodrome where the firefighter will be carrying out fire-fighting duties, the candidate shall be able to :

(*a*) Identify the types of aircraft regularly operating at their airport or aerodrome ;

(*b*) Identify the categories of aircraft propulsion systems ;

(*c*) Use the correct terms to describe major aircraft structural components ;

(*d*) Describe the types of batteries found on aircraft and their associated hazards ;

(*e*) Identify the general location of portable fire extinguishers ;

(*f*) Describe the materials used in aircraft construction ;

(*g*) Explain the differences in aircraft construction as it relates to fire fighting ;

(*h*) Use an aircraft crash chart to identify and describe the location of normal and emergency exits, fuel tanks, passenger and crew compartments, oil tanks, hydraulic reservoirs, oxygen tanks, batteries, and break-in points for given aircraft ;

(*i*) Use an aircraft crash chart to describe passenger, crew and fuel capacities for a given aircraft ;

(*j*) Identify a flight data recorder and cockpit voice recorder ;

(*k*) Locate normal entry doors, emergency exit openings and evacuation slides for a given aircraft;

(*l*) Describe the opening of all doors and compartments for a given aircraft;

(*m*) Describe the operation of evacuation slides and/or other emergency egress systems for a given aircraft ;

(*n*) Identify aircrew and passenger locations for a given aircraft ;

(*o*) Indicate the type of fuel used and location of fuel tanks for a given aircraft;

(*p*) Locate break-in points for a given aircraft ;

(*q*) Locate the batteries for a given aircraft ;

(*r*) Locate key components of the fuel, oxygen, hydraulic, electrical, fire protection, APU, brake, wheel systems, and pressurization systems for a given aircraft ; and

(*s*) Describe aircraft hazards that may be unique or unusual for a given aircraft.

NOTE : Examples of unusual hazards include military aircraft equipped with ejection seats, tanks containing pesticides on crop-spraying aircraft, and aircraft equipped with additional fuel tanks for ferry purposes.

(*iii*) With respect to familiarisation with firefighter duties under the Aerodrome Emergency Response Plan where the fire-fighter will be carrying out fire-fighting duties, the candidate shall be able to :

(*a*) Describe each emergency listed in the plan ;

(*b*) Describe the chain of command and authority, and identify the individuals associated with each position requiring a response from the aircraft fire-fighting service for each emergency listed in the plan ;

(*c*) If applicable, describe the procedure for the change of command during any phase of the emergency requiring a response from the aircraft fire-fighting service for each emergency listed in the plan ;

(*d*) With reference to the emergency response plan, identify other agencies involved in the plan requiring a response from the aircraft fire- fighting service, and describe their respective roles and responsibilities for each emergency listed in the plan ; and

(*e*) Demonstrate knowledge of their individual role and duties during regular exercises under the plan.

(*c*) ADDITIONAL TRAINING

(1) *Low-Visibility Training*

At an aerodrome certified for low-visibility operations for Category III approaches, firefighters shall practice the use of low-visibility equipment provided at that aerodrome in simulated Category III low-visibility conditions, and demonstrate the ability to :

(*i*) Locate a simulated accident site ;

(*ii*) Navigate the aircraft fire-fighting vehicle to the simulated accident site ; and

(*iii*) Negotiate terrain and obstacles with the AFF vehicle.

(2) *Command and Control Training*

Where a firefighter is assigned operational command and control responsibilities for the aircraft fire-fighting service, training in command and control functions shall be provided to enable that fire-fighter to :

(*i*) Assess tactical priorities ;

(*ii*) Control and manage a fire stream ;

(*iii*) Control and manage resources ;

(*iv*) Select, employ and direct a defensive strategy ;

(*v*) Assess fire-ground factors ;

(*vi*) Direct apparatus placement ; and

(*vii*) Explain command procedures.

(*d*) RECURRENT TRAINING

(1) *General*

Recurrent training shall be provided to enable each firefighter to maintain the level of proficiency established in this standard.

Except for live-fire training, every firefighter must complete training in each element of the standards at least once every three years.

(*e*) LIVE-FIRE TRAINING

Live-fire drill training shall be provided to all fire-fighting personnel every 12 months as follows :

(*i*) A live-fire drill shall simulate a realistic fire-fighting situation, and be of sufficient size and intensity to provide a challenge to the firefighter in relation to the equipment used ;

(*ii*) The conditions simulated in a live-fire drill shall emulate the type of fire which could be encountered on a typical aircraft at the aerodrome ;

(*iii*) During the drill, each firefighter shall demonstrate the control and extinguishment of a simulated aircraft fire using :

(*a*) Handlines and or turrets using an AFF vehicle of a type used at the aerodrome, and

(*b*) Fire-fighting streams to protect firefighters and aircraft occupants using either handlines or turrets.

NOTE 1 : It is intended that the live-fire drill will provide an opportunity for the fire-fighting team to become familiar with the use of all fire extinguishment equipment that will be used in the event of an accident. If possible, a simulated evacuation of aircraft occupants will help in creating a realistic situation.

NOTE 2 : Training curriculum on ARFF Personnel are contained in the advisory circular : NCAA-AC-ARD005 "Assessing Competence of ARFF Training Organizations and ARFF Personnel."

IS:12.6.16.10(*d*).—(*a*) TRAINING RECORDS

Fire Fighter Qualifica-tions.

Individual training records shall be maintained on each firefighter and shall include as a minimum :

(1) the name of the individual being trained ;

(2) the date of training ;

(3) the place where training is received ;

(4) the subjects covered and course methodology ;

(5) the climatic conditions, in the case of practical training ;

(6) the duration of training ;

(7) any instructor comments ;

(8) the performance evaluation ;

(9) the name of the instructor ; and

(10) the signature of the student.

Communica-tion and Alerting System.

IS:12.6.16.13.—(*a*) The alerting system shall allow the activating agency to alert the personnel and dispatch the aircraft fire-fighting vehicles. A secondary power supply or alternate system shall be provided as a contingency in the event of a primary system failure.

(*b*) Each aircraft fire-fighting vehicle shall be provided with communication equipment capable of communicating with at least :

(1) every other aircraft fire-fighting vehicle ;

(2) the fire station exercising operational control as specified in the Aerodrome Emergency Response Plan ;

(3) the air traffic services unit, or the aerodrome traffic frequency (ATF) ; and

(4) an aircraft in a situation of emergency using an established discreet frequency.

(*c*) A communication system shall be provided to ensure the prompt and dependable transmission of alarms and other essential emergency information. Direct communication shall be provided between the activating agency or authority, the fire station, and responding vehicles.

(*d*) An alerting system for fire-fighting personnel, and or other aerodrome personnel shall be provided at a fire station and capable of activation from that station, or other designated agency.

Wild Life Planning Management—Application.

IS:12.6.23.1.—(*a*) The wildlife hazards referred to in Regulation 12.6.23.1(*a*)(4),Regulation 12.6.23.3.3, Regulation 12.6.23.1 and Regulation 12.6.23.6(*a*) include, in the following descending order of priority with respect to risk, the following hazards :

(1) Black kites ;

(2) egrets ;

(3) hawks ;

(4) swallows ;

(5) goats ;

(6) dogs.

(*b*) The list of wildlife hazards referred to paragraph (*a*) is not intended to be exhaustive.

NOTE : The above list ranks wildlife hazards in descending order from the most hazardous to the least hazardous with respect to risk and as such, identifies the hazards that are of primary concern for the operator. All hazards contained in this list have the potential to cause an incident outlined in Regulation 12.6.23.1(*a*)(3) and Regulation 12.6.23.4.1(*f*)(2).

Risk Analysis.

IS:12.6.23.3.—(*a*) The following constitutes the information to be collected by the operator of an airport pursuant to Regulation 12.6.23.3(*a*).

(1) wildlife strike data ;

NOTE : When reporting a wildlife strike, the form specified by the Authority shall be used. Any information that the operator of an airport has that is outlined on that form should be included.

(*b*) aircraft movement statistics ;

(*c*) aircraft types ; and

(*d*) ecological studies and wildlife inventories.

NOTE : An Airport Wildlife Management Plan template may be used to assist operators with the layout of risk assessments and management plans.

Airport Wildlife Management Plan.

IS:12.6.23.4.—(*a*) Pursuant to Regulation 12.6.23.4.1, the operator shall, in developing an airport wildlife management plan, use the guidance material (Advisory Circular No. NCAA-AC-ARD012), that may be provided by the Authority.

(*b*) The operator shall submit the airport wildlife management plan in the form of a manual and in duplicate to the Authority.

Content of Airport Wildlife Management Plan.

IS:12.6.23.4.2. Pursuant to Regulations 12.6.23.4.1(*a*)(3), the requirements that shall be contained in an airport wildlife management plan are :

(1) the identification of the species of any wildlife struck by aircraft ;

(2) the regular maintenance of wildlife management logs indicating management activities, environmental changes; wildlife interactions and animal remains identified by species ; and

(3) the evaluation of habitats, land uses and food sources, located at or near the airport, that might attract wildlife which may affect the safe operation of the airport including, if needed, arrangements for assessments, studies and monitoring.

IS:12.6.23.4.3. Pursuant to Regulation 12.6.23.4.3, the following constitutes the matters in which the operator shall provide training to persons having duties in respect of the airport wildlife management plan : Training.

(1) nature and extent of the wildlife management problem ;

(2) regulations, standards and guidance material related to airport wildlife management programs ;

(3) bird ecology and biology ;

(4) bird identification, including the use of field guides ;

(5) mammal ecology and biology ;

(6) mammal identification, including the use of field guides ;

(7) rare and endangered species and species of special concern, including related regulations and policies ;

(8) habitat management ;

(9) off-airport land use issues ;

(10) active wildlife control measures ;

(11) wildlife removal techniques ;

(12) firearm safety ;

(13) wildlife management planning ; and

(14) development of awareness programs.

IS:12.6.23.4.4. Pursuant to Regulation 12.6.23.4.4, the communication and alerting procedure to be used in order to alert pilots as soon as possible of the wildlife hazards at the airport and associated risks may include : Communication and Alerting Procedure.

(1) where the aerodrome has air traffic services (ATS), bilateral radio communications or broadcast of airport advisories ;

(2) if an immediate alert is required, direct radio contact can be used, when available ;

(3) publication of a NOTAM in respect of the airport, whether in combination or not with the procedure referred to in paragraph (1) or (2).

Information to be included in Heliport Manual.

IS:12.11.3.—

1.0. *General information including the following* :

(*a*) name of heliport owner/operator, and address and telephone number[s] at which the owner/operator can be contacted at all times ;

(*b*) purpose, and scope of the heliport manual ;

(*c*) conditions for use of the heliport including operational limitation and restriction ;

(*d*) available aeronautical information system and procedures for its promulgation ;

(*e*) system for recording helicopter movements ;

(*f*) obligations of the heliport operator.

2.0. *Particulars of Heliport Site.*

(*a*) a plan of the heliport showing the main heliport facilities and heliport boundaries ;

(*b*) a plan showing distance of heliport from the nearest city and aerodrome ;

(*c*) particulars of the title of the heliport site.

3.0. *Particulars of the Heliport Required to be Reported to the Aeronautical Information Service* (*AIS*).

(*a*) the name and type of the heliport ;

(*b*) the location and distance of the heliport to the nearest town or aerodrome ;

(*c*) the geographical co-ordinates of the heliport reference point and elevation determined by reference to the World Geodetic System 1984 (WGS - 84) reference datum ;

(*d*) the heliport dimensions and related information (FATO/TLOF - type, dimension, slope, true bearing, designation number and bearing strength in tonnes) ;

(*e*) the declared distances (take-off distance available ; rejected take-off distance available; and landing distance available) ;

(*f*) information about visual aids systems (markings and lighting ; wind direction indicator ; VAGS ; HAPI) ;

(*g*) the operational status of associated facilities services, navigational aids and heliport conditions.

(*h*) details of heliport beacon (where provided).

4.0. *Heliport Operating Procedures and Safety Measures*.

4.1. *Heliport Administration*

Particulars of the helideck administration, including -

(*a*) the helideck organizational chart showing the name and position of key personnel ;

(*b*) the duty-list and responsibilities of key personnel, in particular the Heliport Manager and Heliport Duty Officer ; and

(*c*) the name and telephone number of the Heliport Manager.

4.2. *Heliport Emergency Plan*

Particulars of the heliport emergency plan, including the following :

(*a*) plans for dealing with emergencies occurring at the heliport ;

(*b*) details of test for equipment to be used in emergencies, including frequency of those tests; and details of exercise to test the emergency plan, including the frequency of those exercises.

4.3. *Visual Aids and Electrical Systems*

Particulars of procedures for the inspection and maintenance, aeronautical lights [including obstacle lights], signs, markers and electrical systems—

(*a*) arrangements for inspection ;

(*b*) reporting and recording of inspection findings ;

(*c*) correction of deficiencies ;

(*d*) arrangements for routine maintenance ; and

(*e*) arrangements secondary power supply.

4.4. *Heliport Reporting Procedures*

Particulars of procedures for notifying any changes to the infrastructure, facilities and operational procedures, including :

(*a*) arrangement for reporting changes ; and

(*b*) recording of changes.

4.5. *Access to Heliport Area*

Procedure for the prevention of unauthorized entry of person[s] into the heliport.

4.6. *Heliport Serviceability Inspections*

Particulars of procedures for the inspection of the heliport area and obstacle limitation surfaces ; visual aids, including :

(*a*) details of inspection intervals and times ;

(*b*) inspection checklist and logbook ;

(*c*) reporting of inspection findings ; and

(*d*) correction of unsafe conditions or deficiencies.

4.7. *Vehicle and Movement Control*

Where available, particulars of the procedure for the control of vehicular movements.

4.8. *Obstacle Control Measures*

Particulars setting out the procedures for :

(*a*) controlling obstacles within the authority of owner ;

(*b*) monitoring development within the obstacle limitation surfaces ; and

(*c*) coordination for controlling new developments in vicinity of the heliport.

4.9. *Measures to Protect Navigational Aids.*

Particulars of the procedures for the protection of sites for radio navigational aids :

(*a*) arrangements for controlling activities in vicinity of navaids installations ;

(*b*) arrangements for ground maintenance of these installations ; and

(*c*) arrangements for the installation of signs warning of radiation.

4.10. *Removal of Disabled Aircraft*

Particulars of the procedures for removing of a disabled aircraft, including :

(*a*) role of heliport owner and holder of the aircraft certificate of registration ;

(*b*) arrangements for notifying holder of the aircraft certificate of registration ; and

(*c*) arrangements for obtaining equipment and personnel to remove aircraft.

4.11. *Handling of Hazardous Materials*

Particulars of the procedures for safe handling and storage of hazardous materials, including :

(*a*) arrangements for special areas on the helideck for storage of inflammable liquids [including aviation fuel] and other hazardous material ; and

(*b*) method for the delivery, storage, dispensing and handling of hazardous material.

4.12. *Heliport Rescue and Fire Fighting.*

Particulars of the provision of :

(*a*) fire fighting category ;

(*b*) vehicles (where applicable) ;

(*c*) extinguishing agents ;

(*d*) Firefighting and rescue equipment.

4.13. *ATC Coordination Procedures*

Particulars of procedures for coordination with Air Traffic Services Unit[s], including -

(*a*) procedures for arrivals ;

(*b*) procedures for departures ; and

(*c*) communication facilities provided.

4.14. *Maintenance of Heliport Area*

Particulars of procedures for the inspection and maintenance of heliport area :

(*a*) arrangements for inspection ;

(*b*) maintenance of paved areas ;

(*c*) maintenance of markings ; and

(*d*) maintenance of drainage.

5.0. *Safety Management System*

Particulars of procedures to ensure safety during heliport operations:-

(*a*) helicopter arrival procedures [including engine shut-down] ;

(*b*) helicopter departing procedure [including engine-start] ;

(*c*) fuelling procedures and safety precautions ;

(*d*) protection from rotor downwash ;

(*e*) apron sweeping and cleaning ;

(*f*) arrangements for reporting incidents and accidents ; and

(*g*) personnel safety procedures.

6.0. *Quality Systems*

Particulars of Quality Systems with emphasis on operations, maintenance and quality of service delivery to helicopter operators and heliport users including :

(*i*) Scale for weighing baggage, passengers and freight ;

(*ii*) safety briefing room equipped with video machine, TV, tapes chairs etc. ;

(*iii*) procedure for screening (hand held metal detector or walk through metal detector or x-ray machine) of passengers boarding or before entry into the helicopter, and

(*iv*) procedure for checking and carriage of dangerous goods.

7.0. *Environmental Protection*

Particulars of procedures for environmental protection :

(*a*) arrangement for preventing contamination of the land upon which they occupy, and any pollution that results from their activities is managed and cleaned up.

(*b*) arrangement for training the RFF personnel or assigned person to undertake a fuel spill response.

(*c*) arrangement for ensuring that fuelling is performed with precautions to prevent spill onto the soil or into drainage systems. Aircraft, vehicles or component washing is performed in designated areas, where run-off can be collected and diverted from spillage or leakage onto soil.

(*d*) arrangement for ensuring that all waste oils, fuels, chemicals and hazardous waste are stored, handled or disposed in accordance with environmental laws.

(*e*) arrangement for mitigation against the impact of noise pollution within residential areas around heliports vicinity.

8.0. *Control, Amendment and Distribution of Manual*

The procedures for control, amendment and distribution of the heliport manuals including :

(*i*) maintaining the accuracy of the Heliport Manual ;

(*ii*) ensuring the safe and efficient operation of aircraft at the Heliport ; or

(*iii*) ensuring the safety of air navigation ;

(*iv*) ensuring each supervisory member of the Heliport operating staff including those employed by the operator's contractors or agents, where relevant, have copies of relevant sections of the Heliport Manual.

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NIGERIA CIVIL AVIATION REGULATION

PART 14—AIR NAVIGATION SERVICES

INTRODUCTION

The Nigeria Civil Aviation Regulations (Nig. CARs) Part 14 together with ANS (ATM, PANS-OPS, SAR, AIS, AEROCHARTS, AEROMET and AEROTELs) (parts I, II and III) Manuals of Standards constitutes an adaptation of *Annexes* 2, 3, 4, 5, 10, 11, 12 and 15 as integral part of these regulations which addresses the Air Navigation rules, procedures and services' applications as stated in Articles 13, 37 and 38 of the Convention on International Civil Aviation (Chicago) 1944. The Implementing Standards (IS) provide detailed requirements that support the intent of the Regulations presented in a part, and unless otherwise indicated, have the legal force and effect of the referring Regulations.

NIGERIA CIVIL AVIATION REGULATIONS

PART 14-AIR NAVIGATION SERVICES

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NIGERIA CIVIL AVIATION REGULATIONS

PART 14—AIR NAVIGATION SERVICES

14.0. General

Applicability.

14.0.1. This Part shall apply to the provision of :

(*a*) Air Traffic Services (within the Nigerian Airspace) ;

(*b*) Procedures Design (PANS-OPS) ;

(*c*) Aeronautical Aeronautical search and rescue ;

(*d*) Aeronautical Information Services ;

(*e*) Aeronautical Charts ;

(*f*) Aeronautical Meteorology ; and

(*g*) Aeronautical Telecommunications.

Definitions.

14.0.2.—(1) *Accepting Unit*—Air traffic control unit next to take control of an aircraft.

(2) *Accident*—An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which :

(*a*) a person is fatally or seriously injured as a result of :

(*i*) being in the aircraft, or

(*ii*) direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or

(*iii*) direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew ; or

(*b*) the aircraft sustains damage or structural failure which :

(*i*) adversely affects the structural strength, performance or flight characteristics of the aircraft, and

(*ii*) would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin ; or

(*c*) the aircraft is missing or is completely inaccessible.

Note 1. For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified as a fatal injury by ICAO.

Note : An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

Acrobatic Flight—Manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

(3) *Alerting Post* : Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue subcentre.

(4) *Ditching* : The forced landing of an aircraft on water.

(5) *Joint Rescue Coordination Centre* (*JRCC*) : A rescue coordination centre responsible for both aeronautical and maritime aeronautical search and rescue operations.

(6) *Operator* : A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

(7) *ADS-C Agreement*—A reporting plan which establishes the conditions of ADS-C data reporting (i.e. data required by the air traffic services unit and frequency of ADS-C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services).

Note—The terms of the agreement will be exchanged between the ground system and the aircraft by means of a contract, or a series of contracts.

(8) *Advisory Airspace*—An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

(9) *Advisory route*—A designated route along which air traffic advisory service is available.

(10) *Aerodrome*—A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

(11) *Aerodrome Climatological Summary*—Concise summary of specified meteorological elements at an aerodrome, based on statistical data.

(12) *Aerodrome Climatological Table*—Table providing statistical data on the observed occurrence of one or more meteorological elements at an aerodrome.

(13) *Aerodrome Control Service*-Air traffic control service for aerodrome traffic.

(14) *Aerodrome Control Tower*—A unit established to provide air traffic control service to aerodrome traffic.

(15) *Aerodrome Elevation*—The elevation of the highest point of the landing area.

(16) *Aerodrome Meteorological Office*—An office, located at an aerodrome, designated to provide meteorological service for international air navigation.

(17) Aerodrome operating minima-The limits of usability of an aerodrome for :

(*a*) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions ;

(*b*) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation ;

(*c*) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) ; and

(*d*) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

(18) *Aerodrome Reference Point*—The designated geographical location of an aerodrome.

(19) *Aeronautical Chart*—A representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation.

(20) *Aeronautical Meteorological Station*—A station designated to make observations and meteorological reports for use in international air navigation.

(21) *Aeronautical Mobile Service* (*RR S*1.32)—A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

(22) *Aeronautical Telecommunication Station*—A station in the aeronautical telecommunication service.

(23) *Aeronautical Information Circular* (AIC)—A notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

(24) *Aeronautical Information Publication* (*AIP*)—A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

(25) *Aeronautical Information Service* (*AIS*)—A service established within the defined area of coverage responsible for the provision of aeronautical information/data necessary for the safety, regularity and efficiency of air navigation.

(26) *Aerodrome mapping data* (*AMD*)—Data collected for the purpose of compiling aerodrome mapping information.

Note. Aerodrome mapping data are collected for purposes that include the improvement of the user's situational awareness, surface navigation operations, training, charting and planning.

(27) *Aerodrome Mapping Database* (*AMDB*)—A collection of aerodrome mapping data organized and arranged as a structured data set.

(28) *Aeronautical Information Management* (*AIM*)—The dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

(29) *Air Traffic Management* (*ATM*)—The dynamic, integrated management of air traffic and airspace (including air traffic services, airspace management and air traffic flow management)-safely, economically and efficiently - through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

(30) *Confidence Level*—The probability that the true value of a parameter is within a certain interval around the estimate of its value.

Note.—The interval is usually referred to as the accuracy of the estimate.

(31) *Data Product*—Data set or data set series that conforms to a data product specification (ISO 19131*).

(32) *Integrity classification* (aeronautical data).—Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data are classified as :

(*a*) *routine data* : there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe ;

(*b*) *essential data* : there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe ; and (*c*) *critical data* : there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

(33) *AIP Amendment*—Permanent changes to the information contained in the AIP.

(34) *AIP Supplement*—Temporary changes to the information contained in the

(35) AIP which are published by means of special pages.

(36) *AIRAC*—An acronym (aeronautical information regulation and control) signifying a system aimed at advance notification based on common effective dates, of circumstances that necessitate significant changes in operating practices.

(37) *Air defence Identification Zone* (*ADIZ*)—Special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services (ATS).

(38) *AIS Product*—Aeronautical information provided in the form of the elements of the Integrated Aeronautical Information Package (except NOTAM and PIB), including aeronautical charts, or in the form of suitable electronic media.

(39) *Application*—Manipulation and processing of data in support of user requirements (ISO 19104*).

(40) *Aeronautical station* (*RR S*1.81)—A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

(41) *Aeroplane*—A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(42) *Airborne Collision Avoidance System* (*ACAS*)—An aircraft system based on secondary surveillance radar (SSR) trans- ponder signals which operates independently of ground- based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

(43) *Aircraft*—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(44) *Aeroplane*—A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on sur- faces which remain fixed under given conditions of flight.

(45) *Airborne Collision Avoidance System* (*ACAS*)—An aircraft system based on secondary surveillance radar (SSR) trans- ponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

(46) *Air*—ground control radio station—An aeronautical tele- communication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.

(47) *Air-taxiing*—Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

Note-The actual height may vary, and some helicopters may require air-taxiing above 8m (25 ft) AGL to reduce ground effect turbulence or provide clearance for cargo slingloads.

(48) *Aircraft Stand*—A designated area on an apron intended to be used for parking an aircraft.

(49) *Air Defence Identification Zone*-Special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services (ATS).

(50) *Aircraft Observation*—The evaluation of one or more meteorological elements made from an aircraft in flight.

(51) *AIRMET information*—Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en- route weather phenomena which may affect the safety of low-level aircraft operations and which was not already included in the forecast issued for low-level flights in the flight information region concerned or sub-area thereof.

(52) *Air-Report*-A report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting.

Note- Details of the AIREP form are given in the PANS-ATM (Doc 4444). Air traffic service-A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

(53) *Air traffic Advisory Service*—A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.

(54) *Air traffic control clearance*—Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Note 1.—For convenience, the term "*air traffic control clearance*" is frequently abbreviated to "*clearance*" when used in appropriate contexts.

Note 2.—The abbreviated term "*clearance*" may be pre-fixed by the words "*taxi*", "*take-off*", "*departure*", "*en-route*", "*approach*" or "*landing*" to indicate the particular portion of flight to which the air traffic control clearance relates.

(55) *Air traffic control service*—A service provided for the purpose of :

(*a*) preventing collisions :

(1) between aircraft, and

(2) on the manoeuvring area between aircraft and obstructions, and

(*b*) expediting and maintaining an orderly flow of air traffic.

(56) *Air traffic Control Unit*—A generic term meaning variously, area control centre, approach control unit or aerodrome control tower.

(57) *Air Traffic Service*—A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

(58) *Air traffic Services Airspaces*—Airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.

Note—ATS airspaces are classified as Class A to G.

(59) *Air traffic Services Reporting Office*—A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Note—An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

(60) *Air traffic Services Unit*—A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

(61) *Air Traffic Management* (*ATM*)—The dynamic, integrated management of air traffic and Airspace, including air traffic services, airspace management and air traffic flow management-safely, economically and efficiently through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

(62) *Air transit route*—A defined route for the air transiting of helicopters.

(63) *Airway*—A control area or portion thereof established in the form of a corridor.

(64) *Alerting post*—Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue subcentre.

(65) *Alert Phase*—A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

(66) *Alerting Service*—A service provided to notify appropriate organizations regarding aircraft in need of aeronautical search and rescue aid, and assist such organizations as required.

(67) *Alternate Aerodrome*—An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternate aerodromes include the following :

(68) *Take-off Alternate*—An alternate aerodrome at which an aircraft can land should this become necessary shortly after take- off and it is not possible to use the aerodrome of departure.

(69) *En-Route Alternate*—An aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en-route.

(70) *ETOPS En-Route Alternate*—A suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shut- down or other abnormal or emergency condition while en-route in an ETOPS operation.

(71) *Destination Alternate*—An alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note—The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

(72) *Alternative Means of Communication*—A means of communication provided with equal status, and in addition to the primary means.

(73) *Altitude*—The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

(74) *AIS Provider*—The body responsible for providing aeronautical information services.

(75) *Approach control service*—Air traffic control service for arriving or departing controlled flights.

(76) *Approach Control Unit*—A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

(77) Appropriate authority—

(*a*) *Regarding flight over the high seas*—The relevant authority of the State of Registry.

(*b*) *Regarding flight other than over the high seas*—The relevant authority of the State having sovereignty over the territory being overflown.

(78) *Appropriate ATS Authority*—The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

(79) *Assemble*—A process of merging data from multiple sources into a database and establishing a baseline for subsequent processing.

(80) *Area control centre*—A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

(81) *Application*—Manipulation and processing of data in support of user requirements (ISO 19104*).

(82) *Apron*—A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

(83) *Area minimum altitude* (*AMA*)—The minimum altitude to be used under instrument meteorological conditions (IMC), that provides a minimum obstacle clearance within a specified area, normally formed by parallels and meridians.

(84) *Area navigation* (*RNAV*)—A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space- based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note—Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

(85) *Arrival Routes*—Routes identified in an instrument approach procedure by which aircraft may proceed from the en-route phase of flight to an initial approach fix.

(86) *ATS Route*—A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services.

Note 1—The term ATS route is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

Note 2—*An ATS route is defined by route specifications that include an ATS route designator, the track to or from significant points (waypoints), distance between significant points, reporting requirements and, as determined by the appropriate ATS authority, the lowest safe altitude.*

(87) *ATS Surveillance System*.—A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

Note—A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.

(88) *Authorised Designer*—A person who is the holder of procedure design authorisation that is in force.

(89) *Automatic Dependent Surveillance*—broadcast (ADS-B)-A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

(90) *Automatic Dependent Surveillance-Contract* (*ADS-C*)—A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

Note—The abbreviated term "ADS contract" is commonly used to refer to ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode.

(91) *Automatic dependent surveillance* (*ADS*)—A surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position-fixing systems, including aircraft identification, four- dimensional position and additional data as appropriate.

(92) *Bare Earth*.—Surface of the Earth including bodies of water and permanent ice and snow, and excluding vegetation and man-made objects.

(93) *Briefing*—Oral commentary on existing and/or expected meteorological conditions.

(94) *Calendar*—Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108*).

(95) *Canopy*—Bare Earth supplemented by vegetation height.

(96) *Ceiling*—The height above the ground or water of the base of the lowest layer of cloud below 6 000 metres (20 000 feet) covering more than half the sky.

(97) *Certified designer*—A person authorised to carry on instrument on flight procedure of a type covered by the certificate subject to any condition set out therein.

(98) *Change-over point*—The point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

Note—Change-over points are established to provide the optimum balance in respect of signal strength and quality between facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.

* All ISO Standards are listed at the end of this chapter.

(99) *Clearance Limit*—The point to which an aircraft is granted an air traffic control clearance.

(100) *Clearway*—A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.

(101) *Cloud of Operational Significance*—A cloud with the height of cloud base below 1,500m (5,000ft) or below the highest minimum sector altitude, whichever is greater, or a cumulonimbus cloud or a towering cumulus cloud at any height.

(102) *Consultation*—Discussion with a meteorologist or another qualified person of existing and/or expected meteorological conditions relating to flight operations ; a discussion includes answers to questions.

(103) *Continental Shelf*—means the continental shelf of Nigeria.

(104) *Control Area*—A controlled airspace extending upwards from a specified limit above the earth.

(105) *Controlled Aerodrome*—An aerodrome at which air traffic control service is provided to aerodrome traffic.

Note-The term "*controlled aerodrome*" indicates that air traffic control service is provided to aerodrome traffic but does not necessarily imply that a control zone exists.

(106) *Controlled Airspace*—An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Note—Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E as described in *Annex* 11, 2.6.

(107) *Controlled Flight*—Any flight which is subject to an air traffic control clearance.

(108) *Controller-Pilot Data Link Communications* (*CPDLC*)—A means of communication between controller and pilot, using data link for ATC communications.

(109) *Control Zone*—A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

(110) *Cruise Climb*—An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decrease.

(1.) *Cruising Level*—A level maintained during a significant portion of a flight.

(2.) *Current Flight Plan*—The flight plan, including changes, if any, brought about by subsequent clearances.

(3.) *Contour Line*—A line on a map or chart connecting points of equal elevation.

(4.) *Culture*—All man-made features constructed on the surface of the Earth, such as cities, railways and canals.

(5.) *Cyclic Redundancy Check* (*CRC*)—A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

(6.) *Danger area*—An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

(7.) *Data link communications*—A form of communication intended for the exchange of messages via a data link.

(8.) *Data product specification*—Detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party (ISO 19131*).

Note—A data product specification provides a description of the universe of discourse and a specification for mapping the universe of discourse to a data set. It may be used for production, sales, end-use or other purpose.

(9.) *Database*—One or more files of data so structured that appropriate applications may draw from the files and update them.

Note—This primarily refers to data stored electronically and accessed by computer rather than in files of physical records.

(10.) *Data Product*-Data set or data set series that conforms to a data product specification (ISO 19131*).

(111) *Data Product Specification*—Detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party (ISO 19131*).

(112) *Data Quality*-A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity.

(113) *Data Set*—Identifiable collection of data (ISO 19101*).

(114) *Data Set Series*—Collection of data sets sharing the same product specification (ISO 19115*).

(115) *Design Work*—in relation to a instrument flight procedure, means any of the following work :

(*a*) designing the procedure or a part of the procedure ;

(*b*) verifying, maintaining, reviewing or amending the procedure ;

(*c*) supervising a person carrying on any work mentioned in paragraph (*a*) or (*b*)

(116) *Datum*—Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO 19104*).

(117) *Digital Elevation Model* (*DEM*)—The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum.

Note—Digital Terrain Model (DTM) is sometimes referred to as DEM.

(118) *Distress Phase*—A situation wherein there is a reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance.

(119) *Ditching*—The forced landing of an aircraft on water.

(120) *Direct Transit Arrangements*—Special arrangements approved by the public authorities concerned by which traffic which is pausing briefly in its passage through the Contracting State may remain under their direct control.

(121) *Displaced Threshold*—A threshold not located at the extremity of a runway.

(122) *Double Channel Simplex*—Simplex using two frequency channels, one in each direction.

Note—This method was sometimes referred to as crossband.

(123) *Duplex*—A method in which telecommunication between two stations can take place in both directions simultaneously.

(124) *Effective Acceptance Bandwidth*—The range of frequencies with respect to the assigned frequency for which reception is assured when all receiver tolerances have been taken into account.

(125) *Effective Adjacent Channel Rejection*—The rejection that is obtained at the appropriate adjacent channel frequency when all relevant receiver tolerances have been taken into account.

(126) *Electronic Aeronautical Chart Display*—An electronic device by which flight crews are enabled to execute, in a convenient and timely manner, route planning, route monitoring and navigation by displaying required information.

(127) *Elevation*—The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.

(128) *Ellipsoid Height* (*Geodetic Height*)—The height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question.

(129) *Emergency Phase*—A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

(130) *Employee of a Certified Designer or an Authorised Designer*—a person who carries on design work on a terminal instrument flight procedure for the designer in the course of performing services for the designer.

(131) *Estimated off-Block Time*—The estimated time at which the aircraft will commence movement associated with departure.

(132) *Estimated Time of Arrival*—For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

(133) *Essential Radio Navigation Service*—A radio navigation service whose disruption has a significant impact on operations in the affected airspace or aerodrome.

(134) *Expected Approach Time*—The time at which ATC expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing.

Note—The actual time of leaving the holding fix will depend upon the approach clearance.

(135) *Extended Range Operation*-Any flight by an aeroplane with two turbine engines where the flight time at the one engine in operative cruise speed (in ISA and still air conditions), from a point on the route to an adequate alternate aerodrome, is greater than the threshold time approved by the State of the Operator.

(136) *Fan Marker Beacon*—A type of radio beacon, the emissions of which radiate in a vertical fan-shaped pattern.

(137) *Feature*—Abstraction of real world phenomena (ISO 19101*).

(138) *Feature Attribute*—Characteristic of a feature (ISO 19101*).

Note—A feature attribute has a name, a data type and a value domain associated with it.

(139) *Feature operation*—Operation that every instance of a feature type may perform (ISO 19110*).

Note—An operation upon the feature type dam is to raise the dam. The result of this operation is to raise the level of waterin the reservoir.

(140) *Feature Relationship*-Relationship that links instances of one feature type with instances of the same or a different feature type (ISO 19101*).

(141) *Feature Type*—Class of real world phenomena with common properties (ISO 19110*).

Note—In a feature catalogue, the basic level of classification is the feature type. Filed flight plan-The flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes.

(142) *Final Approach*—That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified,

(*a*) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified ; or

(*b*) at the point of interception of the last track specified in the approach procedure ; and ends at a point in the vicinity of an aerodrome from which :

(1) a landing can be made ; or

(2) a missed approach procedure is initiated.

(143) *Final Approach and Take-off Area* (*FATO*)—A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by performance Class 1 helicopters, the defined area includes the rejected take-off area available.

(144) *Final Approach fix or Point*—That fix or point of an instrument approach procedure where the final approach segment commences.

(145) *Final Approach Segment*—That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

(146) *Flight Information Region*—An airspace of defined dimensions within which flight information service and alerting service are provided.

(147) *Flight Crew Member*—A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

(148) *Flight Information Centre*—A unit established to provide flight information service and alerting service.

(149) *Flight Information Service*—A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

(150) *Flight Level*-A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Note 1.—A pressure type altimeter calibrated in accordance with the Standard Atmosphere :

(*a*) when set to a QNH altimeter setting, will indicate altitude ;

(*b*) when set to a QFE altimeter setting, will indicate height above the QFE reference datum ;

(*c*) when set to a pressure of 1013.2 hPa, may be used to indicate flight levels.

Note 2.—The terms "height" and "altitude", used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

(151) *Flight Plan*—Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

(152) *Flight Visibility*—The visibility forward from the cockpit of an aircraft in flight.

(153) *Forecast*—A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

(154) *GAMET Area Forecast*—An area forecast in abbreviated plain language for low-level flights for a flight information region or sub-area thereof, prepared by the meteorological office designated by the meteorological authority concerned and exchanged with meteorological offices in adjacent flight information regions, as agreed between the meteorological authorities concerned.

(155) *Geodesic Distance*—The shortest distance between any two points on a mathematically defined ellipsoidal surface.

(156) *Geodetic Datum*—A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

(157) *Geoid*—The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.

Note—The geoid is irregular in shape because of local gravitational disturbances (wind tides, salinity, current, etc.) and the direction of gravity is perpendicular to the geoid at every point.

(158) *Geoid Undulation*-The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid.

Note—In respect to the World Geodetic System-1984 (WGS-84) defined ellipsoid, the difference between the WGS-84 ellipsoidal height and orthometric height represents WGS-84 geoid undulation.

(159) *Glide Path*—A descent profile determined for vertical guidance during a final approach.

(160) *Gregorian Calendar*—Calendar in general use ; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar (ISO 19108*).

Note—In the Gregorian calendar, common years have 365 days and leap years 366 days divided into twelve sequential months.

(161) *Grid Point Data in Digital Form*—Computer processed meteorological data for a set of regularly spaced points on a chart, for transmission from a meteorological computer to another computer in a code form suitable for automated use.

Note—In most cases, such data are transmitted on medium-or high-speed telecommunications channels.

(162) *Ground Visibility*—The visibility at an aerodrome as reported by an accredited observer or by automatic systems.

(163) *Heading*—The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid).

(164) *Head Designer for a Certified Designer*—A person appointed as head designer for the certified designer.

(165) *Height*-The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

(166) *Helicopter Stand*—An aircraft stand which provides for parking a helicopter and where ground taxi operations are completed or where the helicopter touches down and lifts off for air taxi operations.

(167) *Heliport*—An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

(168) *Holding Procedure*—A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.

(169) *Hot Spot*-A location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

(170) *Human Factors Principles*—Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

(171) *Hypsometric Tints*—A succession of shades or colour gradations used to depict ranges of elevation.

(172) *ICAO Doc*.8168 (*PANS-OPS*)—Doc.8168-OPS/611 Volume II (Procedures for Air Navigation Services-Construction of Visual and Instrument Flight Procedures) approved and published by decision of the Council of the International Civil Aviation Organisation, as in force from time to time.

(173) *Initial Approach Segment*—That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point.

(174) *Instrument Approach Procedure*—A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en- route obstacle clearance criteria apply. Instrument approach procedures are classified as follows :

(175) *Non-Precision Approach* (*NPA*) *Procedure*—An instrument approach procedure which utilizes lateral guidance but does not utilize vertical guidance.

(176) *Approach Procedure with Vertical Guidance* (*APV*)—An instrument approach procedure which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

(177) *Precision Approach* (*PA*) *Procedure*-An instrument approach procedure using precision lateral and vertical guidance with minima as determined by the category of operation.

Note—Lateral and vertical guidance refers to the guidance provided either by :

(*a*) a ground-based navigation aid ; or

(*b*) computer-generated navigation data.

(178) *Integrated Aeronautical Information Package*—A package which consists of the following elements :

(*i*) AIP, including amendment service ;

(*ii*) Supplements to the AIP ;

(*iii*) NOTAM and PIB ;

(*iv*)AIC ; and

(*v*) checklists and lists of valid NOTAM.

(179) *Integrity* (*Aeronautical Data*)—A degree of assurance that an aeronautical data and its value has not been lost or altered since the data origination or authorized amendment.

(180) *International Airport*—Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

(181) *International NOTAM Office* (*NOF*)—An office designated by a State for the exchange of NOTAM internationally.

(182) *International Airways Volcano Watch* (*IAVW*)—International arrangement for monitoring and providing warnings to aircraft of volcanic ash in the atmosphere.

Note—The IAVW is based on the cooperation of aviation and non-aviation operational units using information derived from observing sources and networks that are provided by States. The watch is coordinated by ICAO with the cooperation of other concerned international organizations.

(183) *Logon Address*—A specified code used for data link logon to an ATS unit.

(184) *Intermediate Approach Segment*—That segment of an instrument approach procedure between either the intermediate approach fix and the final approach fix or point, or between the end of a reversal, racetrack or dead reckoning track procedure and the final approach fix or point, as appropriate.

(185) *Intermediate Holding Position*—A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.

(186) *International Airways Volcano Watch* (*IAVW*)—International arrangements for monitoring and providing warnings to aircraft of volcanic ash in the atmosphere.

Note—The IAVW is based on the cooperation of aviation and non-aviation operational units using information derived from observing sources and networks that are provided by States. The watch is coordinated by ICAO with the cooperation of other concerned international organizations.

(187) *Isogonal*—A line on a map or chart on which all points have the same magnetic variation for a specified epoch.

(188) *Isogriv*—A line on a map or chart which joins points of equal angular difference between the North of the navigation grid and Magnetic North.

(189) *Joint rescue coordination centre* (*JRCC*)—A rescue coordination centre responsible for both aeronautical and maritime aeronautical search and rescue operations.

(190) *Landing Area*—That part of a movement area intended for the landing or take-off of aircraft.

(191) *Landing Direction Indicator*—A device to indicate visually the direction currently designated for landing and for take-off.

(192) *Level*—A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

(193) *Logon address*—A specified code used for data link logon to an ATS unit.

(194) *Magnetic Variation*—The angular difference between True North and Magnetic North.

Note—The value given indicates whether the angular difference is East or West of True North.

(195) *Manoeuvring Area*—That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

(196) *Marking*—A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

(197) *Mean power* (*of a radio transmitter*)—The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.

Note—A time of 1/10 second during which the mean power is greatest will be selected normally.

(198) Metadata-Data about data (ISO 19115*).

Note—Data that describes and documents data.

(199) *Meteorological Authority*—The authority providing or arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State.

(200) *Meteorological Bulletin*—A text comprising meteorological information preceded by an appropriate heading.

(201) *Meteorological Information*—Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

(202) *Meteorological Office*—An office designated to provide meteorological service for international air navigation.

(203) *Meteorological Report*—A statement of observed meteorological conditions related to a specified time and location.

(204) *Meteorological Satellite*—An artificial Earth satellite making meteorological observations and transmitting these observations to Earth.

(205) *Minimum en-route Altitude* (*MEA*)—The altitude for an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance.

(206) *Minimum Obstacle Clearance Altitude* (*MOCA*)—The minimum altitude for a defined segment of flight that provides the required obstacle clearance.

(207) *Minimum Sector Altitude*—The lowest altitude which may be used which will provide a minimum clearance of 300 m (1,000 ft) above all objects located in an area contained within a sector of a circle of 46 km (25 NM) radius centred on a radio aid to navigation.

(208) *Missed Approach Point* (*MAPt*)—That point in an instrument approach procedure at or before which the prescribed missed approach procedure must be initiated in order to ensure that the minimum obstacle clearance is not infringed.

(209) *Missed Approach Procedure*—The procedure to be followed if the approach cannot be continued.

(210) *Movement Area*—That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

(211) *Navigation Specification*—A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

(212) *Required Navigation Performance* (*RNP*) *Specification*—A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

(213) *Area Navigation* (*RNAV*) *Specification*—A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1.—*The Performance-based Navigation (PBN) Manual (Doc. 9613), Volume II, contains detailed guidance on navigation specifications.*

Note 2.—*The term RNP, previously defined as "a statement of the navigation performance necessary for operation within a defined airspace", has been removed from this Annex as the concept of RNP has been overtaken by the concept of PBN. The term RNP in this Annex is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc. 9613.*

(214) *NOTAM*—A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

(215) *Observation* (*Meteorological*)—The evaluation of one or more meteorological elements.

(216) *Obstacle*—All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that :

(*a*) are located on an area intended for the surface movement of aircraft ; or (*b*) extend above a defined surface intended to protect aircraft in flight ; or (*c*) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

Note.—*The term obstacle is used in this Annex solely for the purpose of specifying the charting of objects that are considered a potential hazard to the safe passage of aircraft in the type of operation for which the individual chart series is designed.*

(217) *Obstacle clearance altitude* (*OCA*) *or obstacle clearance height* (*OCH*)—The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1.—*Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.*

Note 2.—*For convenience when both expressions are used they may be written in the form "obstacle clearance altitude/height" and abbreviated "OCA/H".*

Note 3.—*See Procedures for Air Navigation Services - Aircraft Operations (Doc 8168), Volume I, Part I, Section 4, Chapter 1, 1.5, and Volume II, Part I, Section 4, Chapter 5, 5.4, for specific applications of this definition.*

(218) *Obstacle Free Zone* (*OFZ*)—The airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

(219) *Orthometric Height*—Height of a point related to the geoid, generally presented as an MSL elevation.

(220) *Operational Control*—The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

(221) *Operational Flight Plan*—The operator's plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.

(222) *Operational Planning*—The planning of flight operations by an operator.

(223) *Operator*—A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

(224) *Performance-Based Navigation* (*PBN*)—Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note.—Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

(225) *Pilot-in-Command*—The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

(226) *Prevailing Visibility*—The greatest visibility value, observed in accordance with the definition of "*visibility*", which is reached within at least half the horizon circle or within at least half of the surface of the aerodrome. These areas could comprise contiguous or non-contiguous sectors.

Note.—This value may be assessed by human observation and/or instrumented systems. When instruments are installed, they are used to obtain the best estimate of the prevailing visibility.

(227) *Point Light*—A luminous signal appearing without perceptible length.

(228) *Portrayal*—Presentation of information to humans (ISO 19117*).

(229) *Position* (*Geographical*)—Set of co-ordinates (latitude and longitude) referenced to the mathematical reference ellipsoid which define the position of a point on the surface of the Earth.

(230) *Precision Approach Procedure*—An instrument approach procedure utilizing azimuth and glide path information provided by ILS or PAR.

(231) *Pre-Flight Information Bulletin* (*PIB*)—A presentation of current NOTAM information of operational significance, prepared prior to flight.

(232) *Procedure Altitude*/*Height*—A specified altitude/height flown operationally at or above the minimum altitude/height and established to accommodate a stabilized descent at a prescribed descent gradient/angle in the intermediate/ final approach segment.

(233) *Procedure Turn*—A manoeuvre in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1.—Procedure turns are designated "left" or "right" according to the direction of the initial turn.

Note 2.—Procedure turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

(234) *Pilot-in-Command*—The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

(235) *Pressure-Altitude*—An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.*

(236) *Primary means of Communication*—The means of communication to be adopted normally by aircraft and ground stations as a first choice where alternative means of communication exist.

(237) *Problematic use of Substances*—The use of one or more psychoactive substances by aviation personnel in a way that :

(*a*) constitutes a direct hazard to the user or endangers the lives, health or welfare of others ; and/or

(*b*) causes or worsens an occupational, social, mental or physical problem or disorder.

(238) *Prognostic Chart*—A forecast of a specified meteorological element(s) for a specified time or period and a specified surface or portion of airspace, depicted graphically on a chart.

(239) *Prohibited Area*-An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

(240) *Protected Service Volume*—A part of the facility coverage where the facility provides a particular service in accordance with relevant SARPs and within which the facility is afforded frequency protection.

(241) *Psychoactive Substances*—Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

(242) *Quality*—Degree to which a set of inherent characteristics fulfils requirements (ISO 9000*).

Note 1.—The term "quality" can be used with adjectives such as poor, good or excellent.

Note 2.—”*Inherent*”, as opposed to “*assigned*”, means existing in something, especially as a permanent characteristic.

(243) *Quality assurance*—Part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000*).

(244) *Quality Control*—Part of quality management focused on fulfilling quality requirements (ISO 9000*).

(245) *Quality Management*—Co-ordinated activities to direct and control an organization with regard to quality (ISO 9000*).

(246) *Radio navigation service*—A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

(247) *Radiotelephony*—A form of radiocommunication primarily intended for the exchange of information in the form of speech.

(248) *Regional Air Navigation Agreement*—Agreement approved by the Council of ICAO normally on the advice of a regional air navigation meeting.

(249) *Rescue*—An operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

(250) *Rescue Co-ordination Centre* (*RCC*)—A unit responsible for promoting efficient organization of aeronautical search and rescue services and for co-ordinating the conduct of aeronautical search and rescue operations within a aeronautical search and rescue region.

(251) *Rescue subcentre* (*RSC*)—A unit subordinate to a rescue co-ordination centre, established to complement the latter according to particular provisions of the responsible authorities.

(252) *Relief*—The inequalities in elevation of the surface of the Earth represented on aeronautical charts by contours, hypsometric tints, shading or spot elevations.

(253) *Repetitive Flight Plan* (*RPL*)—A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

(254) *Reporting point*—A specified (named) geographical location in relation to which the position of an aircraft can be reported.

Note.—There are three categories of reporting points : ground-based navigation aid, intersection and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids. A reporting point can be indicated as "on request" or as "compulsory".

(255) *Requirement*—Need or expectation that is stated, generally implied or obligatory (ISO 9000*).

Note 1.—"*Generally implied*" means that it is custom or common practice for the organization, its customers and other interested parties, that the need or expectation under consideration is implied.

Note 2.—*A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement.*

Note 3.—A specified requirement is one which is stated, for example, in a document.

Note 4.—Requirements can be generated by different interested parties.

(256) *Resolution*—A number of units or digits to which a measured or calculated value is expressed and used.

(267) *Restricted Area*—An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

(268) *Reversal Procedure*-A procedure designed to enable aircraft to reverse direction during the initial approach segment of an instrument approach procedure. The sequence may include procedure turns or base turns.

(269) *Route stage*—A route or portion of a route flown without an intermediate landing.

(270) *Runway*—A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

(271) *Runway*—holding position-A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Note.—In radiotelephony phraseologies, the expression "holding point" is used to designate the runway-holding position.

(272) *Runway Strip*—A defined area including the runway and stopway, if provided, intended :

(*a*) to reduce the risk of damage to aircraft running off a runway ; and

(*b*) to protect aircraft flying over it during take-off or landing operations.

(273) *Runway Visual Range* (*RVR*)—The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

(274) *Aeronautical Search and Rescue Services Unit*—A generic term meaning, as the case may be, rescue co-ordination centre, rescue subcentre or alerting post.

(275) *Safety-Sensitive Personnel*—Persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.

(276) *Search*—An operation normally co-ordinated by a rescue co-ordination centre or rescue subcentre using available personnel and facilities to locate persons in distress.

(277) *Aeronautical Search and Rescue Aircraft*—An aircraft provided with specialized equipment suitable for the efficient conduct of aeronautical search and rescue missions.

(278) *Aeronautical Search and Rescue Facility*—Any mobile resource, including designated aeronautical search and rescue units, used to conduct aeronautical search and rescue operations.

(279) *Aeronautical Search and Rescue Service*—The performance of distress monitoring, communication, co-ordination and aeronautical search and rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including co-operating aircraft, vessels and other craft and installations.

(280) *Aeronautical search and rescue region* (*SRR*)—An area of defined dimensions, associated with a rescue co-ordination centre, within which aeronautical search and rescue services are provided.

(281) *Aeronautical search and rescue unit*—A mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of aeronautical search and rescue operations.

(282) *State of Registry*-The State on whose register the aircraft is entered.

(283) *Uncertainty phase*—A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

(284) *Shoulder*—An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

(285) *SIGMET Information*—Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en- route weather phenomena which may affect the safety of aircraft operations.

(286) *Signal Area*—An area on an aerodrome used for the display of ground signals.

(287) *Special VFR Flight*—A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

(288) *Significant Point*—A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Note.—*There are three categories of significant points : ground-based navigation aid, intersection and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids.*

(289) *Simplex*—A method in which telecommunication between two stations takes place in one direction at a time.

Note.—*In application to the aeronautical mobile service, this method may be subdivided as follows* :

(*a*) single channel simplex ; (*b*) double channel simplex ; (*c*) offset frequency simplex.

(290) *Single channel simplex*—Simplex using the same frequency channel in each direction.

(291) *Standard isobaric surface*-An isobaric surface used on a worldwide basis for representing and analysing the conditions in the atmosphere.

(292) *Stopway*—A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off.

(293) *Station Declination*—An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

(294) *Taxiing*—Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

(295) *Taxi-Route*—A defined path established for the movement of helicopters from one part of a heliport to another. A taxi-route includes a helicopter air or ground taxiway which is centred on the taxi-route.

(296) *Taxiway*—A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including :

(*a*) Aircraft stand taxilane-A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

(*b*) *Apron taxiway*—A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.

(*c*) *Rapid exit Taxiway*—A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

(297) *Terminal arrival altitude* (*TAA*)—The lowest altitude that will provide a minimum clearance of 300 m (1,000 ft) above all objects located in an arc of a circle defined by a 46 km (25 NM) radius centred on the initial approach fix (IAF), or where there is no IAF on the intermediate approach fix (IF), delimited by straight lines joining the extremity of the arc to the IF. The combined TAAs associated with an approach procedure shall account for an area of 360 degrees around the IF.

(298) *Terminal control area*—A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes

(299) *Terrain*—The surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles.

Note.—In practical terms, depending on the method of data collection, terrain represents the continuous surface that exists at the bare Earth, the top of the canopy or something in-between, also known as "first reflective surface".

(300) *Threshold*—The beginning of that portion of the runway usable for landing.

Total estimated elapsed time—For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aero- drome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

(301) *Touchdown and Lift-off Area* (*TLOF*)—A load bearing area on which a helicopter may touch down or lift off.

(302) *Touchdown zone*—The portion of a runway, beyond the threshold, where it is intended landing aeroplanes first contact the runway.

(303) *Track*—The projection on the earth's surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).

(304) *Traffic Avoidance Advice*—Advice provided by an air traffic services unit specifying manoeuvres to assist a pilot to avoid a collision.

(305) *Traffic Information*—Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

(306) *Transition Altitude*—The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

(307) *Tropical Cyclone*—Generic term for a non-frontal synoptic-scale cyclone originating over tropical or sub-tropical waters with organized convection and definite cyclonic surface wind circulation.

(308) *Tropical Cyclone Advisory Centre* (*TCAC*)—A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, world area forecast centres and international OPMET databanks regarding the position, forecast direction and speed of movement, central pressure and maximum surface wind of tropical cyclones.

(309) *Unmanned Free Balloon*—A non-power-driven, unmanned, lighter-than- air aircraft in free flight.

Note.—Unmanned free balloons are classified as heavy, medium or light in accordance with specifications contained in Appendix 4.

(310) *Upper-Air Chart*—A meteorological chart relating to a specified upper-air surface or layer of the atmosphere.

(311) *Validation*—Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000*).

(312) *Vectoring*—Provision of navigational guidance to aircraft in the form of specific headings, based on the use of an ATS surveillance system.

(313) *Verification*—Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000*).

Note 1.—The term "verified" is used to designate the corresponding status.

Note 2. Confirmation can comprise activities such as :

(*i*) performing alternative calculations ;

(*ii*) comparing a new design specification with a similar proven design specification ;

(*iii*) undertaking tests and demonstrations ; and

(*iv*) reviewing documents prior to issue.

(314) *Visibility*—Visibility for aeronautical purposes is the greater of :

(*a*) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background ;

(*b*) the greatest distance at which lights in the vicinity of 1,000 candelas can be seen and identified against an unlit background.

Note.—The two distances have different values in air of a given extinction coefficient, and the latter (*b*) varies with the background illumination. The former (*a*) is represented by the meteorological optical range (MOR).

(315) *Visual approach procedure*—A series of predetermined manoeuvres by visual reference, from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, a go-around procedure can be carried out.

(316) *Volcanic Ash Advisory Centre* (*VAAC*)—A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, area control centres, flight information centres, world area forecast centres and international OPMET databanks regarding the lateral and vertical extent and forecast movement of volcanic ash in the atmosphere following volcanic eruptions.

(317) *VOLMET*—Meteorological information for aircraft in flight.

(318) *Data link-VOLMET* (*D-VOLMET*)—Provision of current aerodrome routine meteorological reports (METAR) and aerodrome special meteorological reports (SPECI), aerodrome forecasts (TAF), SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET via data link.

(319) *VOLMET broadcast*.—Provision, as appropriate, of current METAR, SPECI, TAF and SIGMET by means of continuous and repetitive voice broadcasts.

(320) *Waypoint*—A specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation. Waypoints are identified as either :

(321) *World Area Forecast Centre* (*WAFC*)—A meteorological centre designated to prepare and issue significant weather forecasts and upper-air forecasts in digital form on a global basis direct to States by appropriate means as part of the aeronautical fixed service.

(322) *World Area Forecast System* (*WAFS*)—A worldwide system by which world area forecast centres provide aeronautical meteorological en-route forecasts in uniform standardized formats.

(323) *Z Marker Beacon*—A type of radio beacon, the emissions of which radiate in a vertical cone-shaped pattern.

* ISO Standard

9000—*Quality Management Systems—Fundamentals and Vocabulary*
19101—*Geographic information—Reference model*
19104—*Geographic information—Terminology*
19108—*Geographic information—Temporal schema*
19109—*Geographic information—Rules for application schema*
19110—*Geographic information—Feature cataloguing schema*
19115—*Geographic information—Metadata*
19117—*Geographic information—Portrayal*
19131—*Geographic information—Data product specification*

14.0.2.1.—ABBREVIATIONS

A

ACC	Area Control Centre AEROMET Aeronautical Meteorology
AFS	Aeronautical Fixed Service
AFTN	Aeronautical Fixed Telecommunication Network
AIP	Aeronautical Information Publication
AIP SUP	Aeronautical Information Publication Supplements
AIC	Aeronautical Information Circular
AIRAC	Aeronautical Information Regulation and Control
AIS	Aeronautical Information Services
AMSP	Aeronautical Meteorological Service Provider
ANS	Air Navigation Standards
ANSP	Air Navigation Service Provider
ARD	Aerodrome

ARFFS	Aerodrome Rescue and Fire Fighting Services
ATC	Air Traffic Control
ATE	Aeronautical Telecommunications
ATIS	Automatic Terminal Information Service
ATM	Air Traffic Management
ATS	Air Traffic Services
ATSEP	Air Traffic Safety electronic Personnel

C

CAA	Civil Aviation Authority
CAP	Corrective Action Plan CAT Category

D

D- ATIS	Data ATIS
DTGM	DAAS Technical Guidance Materials

E

ENR	En-route
E-TOD	Electronic Terrain and Obstacle Data

F

FIC	Flight Information Centre
FIR	Flight Information Region
Ft.	Foot (feet)

G

GEN	General
GNSS	Global Navigation Satellite System

I

ICAO	International Civil Aviation Organisation
ICAO PANS	International Civil Aviation Organisation Procedural Air Navigation Services
IFR	Instrument Flight Rules
IS	Implementing Standards
ISO	International Organisation for Standardisation

K

Km.	Kilometre(s)
Kt.	Knots

L

LATCI	Local Air Traffic Control Instructions

M

M	Metre
MANFEL	Minimum Air Navigation Facility Equipment List
Met.	Meteorology/Meteorological

METAR	Aerodrome Routine Meteorological Report
MOO	Manual of Operations
MOS	Manual of Standards
MoU	Memorandum of Understanding

N

NCAA	Nigerian Civil Aviation Authority
NEMA	Nigerian Emergency Management Agency
NIG. CARS	Nigerian Civil Aviation Regulations
NOF	International NOTAM Office

O

OPMET	Operational Meteorological Information
OVC	Overcast

P

PANS-OPS	Procedures of Air Navigation Services—Operations
PANS-RAC	Rules of the Air and Air Traffic Control
PANS-ABC	ICAO Abbreviation and Codes
PIB	Pre-flight Information Bulletin

Q

QFE	Atmospheric pressure at aerodrome level
QNH	Observed Atmospheric pressure at aerodrome elevation corrected for temperature and reduced to mean sea level using the ICAO formula
QMS	Quality Management System

R

RCC	Rescue Coordination Centre
RFFS	Rescue and Fire Fighting Services
RVR	Runway Visual Range
RNP	Required Navigation Performance

S

SADIS	Satellite Distribution System
SAR	Aeronautical search and rescue
SARP	Standards and Recommended Practices
SKC	Sky Clear
SIGMET	Significant Meteteorological Information
SOP	Standard Operating Procedure
SRR	Aeronautical search and rescue Region

T

TCU	Towering Cumulus
TGM	Technical Guidance Materials
TURB	Turbulence

U

UTC Universal Co-coordinated Time

V

VOR Very High Frequency Omni directional Ranging

W

WAFC World Area Forecast Centre
WAFS World Area Forecast System WGS-84 World Geodetic Survey
WMO World Meteorological Organisation

14.0.3. Approval of ANSP

14.0.3.1. Provision of Air Navigation Services, in designated airspaces, aerodromes and portions of the airspace over the high seas that lie within the designated airspace, is subject to approval under the Nig. CARs Part 14.

14.0.3.2. A prospective ANSP will be granted an ANSP certificate upon submission of a formal application and proof of conformance with prescribed requirements.

14.0.3.3. An applicant for an ANSP certificate shall make a formal application to the Authority in a manner prescribed by the Authority.

14.0.3.4. The applicant shall undergo a five phase approval process as listed below :

Phase 1 : Pre-application

Phase 2 : Formal Application

Phase 3 : Document Evaluation

Phase 4 : Demonstration and Inspection

Phase 5 : Certification

14.0.3.5. In some cases, the sequence of events may not be entirely appropriate. In such situations, the Authority and the Service Provider would proceed in a manner that considers existing conditions and circumstances. The Service Provider, however, should not expect to be approved until the Authority is assured that the Nig. CARs will be complied with in an appropriate and continuing manner.

14.0.3.6. Each phase is described in sufficient detail to provide a general understanding of the entire approval process in the ANS Advisory Circular for approval of Air Navigation Services' Provider.

14.0.3.7. Exemptions.

(*a*) The Authority may exempt, in writing, Air Navigation Service Provider (ATM, PANS-OPS, SAR, AIS, AEROCHARTS, AEROMET and AEROTELs) from complying with specific provisions of these Regulations ;

(*b*) The exemption process shall be in accordance with Part 1. 4 ;

(*c*) An exemption is subject to the Air Navigation Service Provider (ATM, PANS-OPS, SAR, AIS, AEROCHARTS, AEROMET and AEROTELs) complying with the conditions and procedures specified by the Authority in the Air Navigation Service Provider (ATM, PANS-OPS, SAR, AIS, AEROCHARTS, AEROMET and AEROTELs)Certificate as being necessary in the interest of safety. ;

(*d*) When an Air Navigation Service does not meet the requirement of a standard or practice specified in the Manual Of Standards, these Regulations and other relevant advisory documents, the Authority may determine, after evaluating the aeronautical studies conducted by the Air Navigation Service Provider (ATM, PANS-OPS, SAR, AIS, AEROCHARTS, AEROMET and AEROTELs), the conditions and procedures that are necessary to ensure a level of safety equivalent to that established by the relevant Regulations ;

(*e*) Deviation from these Regulations and the conditions and procedures as set out in the certificate, shall be published in the AIP..

14.0.4. Applicability of the Rules of the Air

14.0.4.1. Territorial application of the rules of the air

The rules of the air shall apply to aircraft bearing the nationality and registration marks of Nigeria, wherever they may be, including Nigeria's territorial waters.

14.0.4.2. Compliance with the rules of the air

The operation of an aircraft either in flight or on the movement area of an aerodrome shall be in compliance with the general rules and, in addition, when in flight, either with :

(*a*) the visual flight rules ; or

(*b*) the instrument flight rules.

14.0.4.3. Responsibility for compliance with the rules of the air

The pilot-in-command of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the pilot-in-command may depart from these rules in circumstances that render such departure absolutely necessary in the interests of safety.

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14.0.4.4. Pre-flight action

Before beginning a flight, the pilot-in-command of an aircraft shall become familiar with all available information appropriate to the intended operation. Pre-flight action for flights away from the vicinity of an aerodrome, and for all IFR flights, shall include a careful study of available current weather reports and forecasts, taking into consideration fuel requirements and an alternative course of action if the flight cannot be completed as planned.

14.0.5. AIRSPACE CLASSIFICATION :

14.0.5.1. ATS airspaces shall be classified and designated in accordance with the following:

(*i*) Class A. IFR flights only are permitted, all flights are provided with air traffic control service and are separated from each other.

(*ii*) Class B. IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.

(*iii*) Class C. IFR and VFR flights are permitted, all flights are provided with air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights.

(*iv*) Class D. IFR and VFR flights are permitted and all flights are provided with air traffic control service, IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights, VFR flights receive traffic information in respect of all other flights.

(*v*) Class E. IFR and VFR flights are permitted, IFR flights are provided with air traffic control service and are separated from other IFR flights. All flights receive traffic information as far as is practical. Class E shall not be used for control zones.

(*vi*) Class F. IFR and VFR flights are permitted, all participating IFR flights receive an air traffic advisory service and all flights receive flight information service if requested.

Note.—Where air traffic advisory service is implemented, this is considered normally as a temporary measure only until such time as it can be replaced by air traffic control. (See also PANS-ATM, Chapter 9.)

(*vii*) Class G. IFR and VFR flights are permitted and receive flight information service if requested.

14.0.5.2. The requirements for flights within each class of airspace shall be as shown in the table in Appendix 4 of ATM MOS.

Note.—Where the ATS airspaces adjoin vertically, i.e. one above the other, flights at a common level would comply with requirements of, and be given services applicable to, the less restrictive class of airspace. In applying these criteria, Class B airspace is therefore considered less restrictive than Class A airspace; Class C airspace less restrictive than Class B airspace, etc.

14.1. Provision of Air Traffic Services

14.1.1 The Authority shall determine the portions of the Nigerian airspace and the aerodromes which shall be provided with air traffic services to :

(*a*) prevent collisions between aircraft ;

(*b*) prevent collisions between aircraft on the maneuvering area of the aerodrome concerned and obstructions on such area ;

(*c*) expedite and maintain an orderly flow of air traffic ;

(*d*) provide advice and information useful for the safe and efficient conduct of flights ; and

(*e*) provide aeronautical search and rescue and related support services.

14.1.2. Need for provision of ATS.

The need for the provision of air traffic services shall be determined after consideration of :

(*a*) the types of air traffic involved ;

(*b*) the density of air traffic ;

(*c*) the meteorological conditions ; and

(*d*) any other factor which may be relevant.

14.1.3. Designation of Airspace.

14.1.3.1. The Authority may designate a particular portion of the airspace as a :

(*a*) Flight information region : To encompass the portions of the airspace over the territory of Nigeria and her territorial waters, where air traffic services shall be provided ;

(*b*) Control area : where air traffic control service shall be provided to meet the objectives of 14.1.1 (*a*), (*b*) and (*c*) of these Regulations ;

(*c*) Control zone : where air traffic control service shall be provided to meet the objectives of 14.1.1 (*a*), (*b*) and (*c*) of these Regulations ; or

(*d*) Advisory area : where air traffic service shall be provided to meet objectives of 14.1.1 (*a*), (*b*), (*c*) and (*d*) of these Regulations.

14.1.3.2. A particular portion of the airspace shall only be designated under 14.1.1 :

(*a*) after consultation with all stakeholders within the industry ; and

(*b*) in relation to the air traffic services which are to be provided.

14.1.3.3. The Authority shall publish the designation of a particular portion of the airspace in accordance with the AIRAC cycle in the AIP, AIP SUP or NOTAM.

14.1.3.4. The Authority may, on a temporary basis, designate a particular portion of the airspace, after consultation with all users ;

14.1.4. Classification of Airspace.

14.1.4.1 The Authority shall classify ATS airspaces using ICAO classification system for the purpose of providing air traffic services ; and shall publish the classification of airspace in accordance with the AIRAC cycle in the AIP, AIP SUP or NOTAM.

14.1.4.2.When applicable, the Authority shall prescribe RNP types for designated areas of the airspace.

14.1.4.3. The Authority shall upgrade a particular airspace of a lower cadre to a higher classification, when the need arises.

14.1.5. Designation of Control Area.

14.1.5.1. The Authority shall, when designating a particular portion of the airspace as a control area, in line with this regulation, prescribe the horizontal and vertical limits of such area.

14.1.5.2. The lowest limit of designated control areas shall be at least 700 feet above the ground or water.

14.1.5.3. Control zones and aerodrome traffic zones shall extend upwards from the surface of the earth.

14.1.6. Designation of Flight Information Regions.

14.1.6.1. The Authority shall, when designating a particular portion of the airspace as a flight information region under this Part, prescribe the borders of such region and make such designation in accordance with the requirements prescribed in this Part.

14.1.7. Designation of Advisory Areas.

14.1.7.1. The Authority shall, when designating a particular portion of the airspace as an advisory area under this Part, prescribe the horizontal and vertical limits of such area.

14.1.8. Establishment and Identification of ATS Routes

14.1.8.1. Where ATS routes are established for protecting and channeling air traffic flow, a safe spacing between adjacent ATS routes shall be provided ;

14.1.8.2. ATS routes shall be identified by approved designators.

14.1.9. Establishment of Change- Over Points/ Significant Points.

14.1.9.1. Change-over points shall be established on ATS route segments defined with reference to VORs ;

14.1.9.2. Significant points shall be established by the Authority for the purpose of defining ATS routes and, or in relation to the requirements of air traffic services for information regarding the progress of flights.

14.1.10. Endorsement of ATC Licence.

14.1.10.1. The Authority shall endorse an ATC licence if it is satisfied that the holder is competent to perform a particular air traffic control function at a particular aerodrome, or in relation to a particular airspace.

14.1.10.2. The Authority may designate an ANSP to grant an endorsement to a person who :

(*a*) is a senior controller within the ATS organisation ;

(*b*) has held a rating for five years for the position in which an endorsement is being sought ; and

(*c*) has been assessed as appropriate.

14.1.11. Responsibility for Control of Air Traffic.

14.1.11.1. Only one air traffic control unit shall control a controlled flight at any given time.

14.1.11.2. Responsibility for control of individual flights

14.1.11.2.1. A controlled flight shall be under the control of only one air traffic control unit at any given time.

14.1.11.3. Responsibility for control within a given block of airspace

14.1.11.3.1. Responsibility for the control of all aircraft operating within a given block of airspace shall be vested in a single air traffic control unit. However, control of an aircraft or groups of aircraft may be delegated to other air traffic control units provided that coordination between all air traffic control units concerned is assured.

14.1.12. Transfer of Responsibility for Control of Air Traffic.

14.1.12.1. An air traffic control unit may transfer the responsibility for control of an aircraft or group of aircraft to another air traffic control unit, provided that coordination between such air traffic control units are effected in line with these Regulations.

14.1.12.2. The holder of a certificate shall ensure that, where transfer of responsibility for control takes place between one air traffic control unit and any other air traffic control unit, the procedures as prescribed in the letter of agreement are complied with, to ensure safe co-ordination.

14.1.12.3. The conditions and requirements for and the rules, procedures and standards connected with a transfer of responsibility for control shall be prescribed in its Manual of Operations.

14.1.13. Reporting and Investigation of Accidents and Incidents.

14.1.13.1.The holder of an ANSP certificate shall report any accident or incident reported to or witnessed by it to the Authority.

14.1.13.2. The reporting and investigation of accidents and incidents by the holder of an ANSP certificate shall be done in accordance with the requirements as prescribed in the Civil Aviation (Investigation of Air Accidents and Incidents) Regulation.

14.1.14. Reporting of Aeronautical Information.

14.1.14.1. An ATS provider, shall as soon as practicable after obtaining any aeronautical information, notify the Authority of :

(*a*) information on aerodrome conditions and any changes thereto, which are relevant and applicable in its area of responsibility ;

(*b*) the operational and serviceability status of associated facilities, services and navigation aids within its area of responsibility ;

(*c*) meteorological information as required for the safe and expeditious operation of flights, and

(*d*) any other information considered to be of operational significance.

14.1.14.2. Aerodrome Operating Minima

(*a*) The Authority shall develop and review aerodrome operating minima based on horizontal visibility and type of navigation aid and landing aid for each landing facility ;

(*b*) No aircraft may be operated in any aerodrome with conditions below such published aerodrome operating minima or amendments thereto ;

(*c*) Such aerodrome operating minima (as amended) shall be published in the Nigeria AIP.

14.1.15. Requirement for Approval as ATS Providers.

14.1.15.1. No person or organisation, shall provide air traffic services in Nigerian airspace and aerodromes unless such person or organisation belongs to any of the under mentioned categories and holds a certificate issued by the Authority in accordance with this section :

(*a*) the organisation is established as a designated ATS provider ; or

(*b*) the person or organisation has a co-operation arrangement with a designated ATS provider ; or

(*c*) there is a commercial agreement with a designated ATS provider.

14.1.15.2. An application for approval as an ATS provider shall be made in the form specified in IS 14.1.15.2.

14.1.16. Responsibility of Holder of Certificate for ATS.

14.1.16.1. The holder of an Air Traffic Services provider certificate shall :

(*a*) provide the services listed in its Manual of Operations, in accordance with the procedures as prescribed in these Regulations ;

(*b*) the service provider's Manual of Operations shall include the following information in its manual of operations :

(*i*) personnel requirements and the responsibilities of personnel.

(*ii*) training and checking of staff and how that information is tracked ;

(*iii*) Quality Assurance/Safety Management System ;

(*iv*) Contingency plans developed for part or total system failure for which the organisation provides the service ;

(*v*) Security plan ;

(*vi*) Facilities and equipment and how those facilities are maintained ;

(*vii*) Fault and Defect reporting ;

(*viii*) Maintenance of documents and records ;

(*ix*) Aeronautical search and rescue responsibilities and co-ordination ;

(*x*) procedures for aerodrome surface movement guidance and control ;

(*xi*) any other information requested by the Authority.

(*c*) an approval to operate as a Service Provider shall include in its manual of operations, any letters of agreement that the service provider has entered into ;

(*d*) hold at least one complete and current copy of its Manual of Operations at each air traffic service unit specified in its Manual of Operations ;

(*e*) comply with all procedures detailed in its Manual of Operations ;

(*f*) comply with the Manual of Standards, prescribed by the Authority, for the provision of Air Traffic Services ;

(*g*) make each applicable part of the Manual of Operations available to the personnel who require those parts to carry out their duties ;

(*h*) continue to comply with the appropriate requirements prescribed in these Regulations ;

(*i*) keep the records of all regular internal inspections for a period of five years from the date of each inspection ;

(*j*) furnish the Authority with the en route facility financial data and enroute facility traffic statistics ;

(*k*) replace or upgrade any obsolete installation ;

(*l*) keep the Authority informed of its plans for the development and modernisation of its facilities.

14.1.17. Co-ordination in Air Traffic Services.

14.1.17.1. Air Traffic Services Providers, in carrying out their objectives, shall have due regards for the requirement to co-ordinate with other airspace users. In particular, Air Traffic Services Providers shall :

(*a*) make available to other Service Providers such information as may be available to the ATS provider to enable the operators meet their obligations under these Regulations ;

(*b*) establish close co-operation and liaison with the military authorities responsible for activities that may affect civil flights. Military activities potentially hazardous to civil aircraft, whether over the territory of a state or over the high seas shall be co-ordinated with the appropriate ATS provider ;

(*c*) make adequate arrangement for the reception of the most up-to-date meteorological information for aircraft operations with the appropriate Aeronautical Meteorological Service Provider ;

(*d*) provide operational information to the Aeronautical Information Services Provider in sufficient time to allow the aeronautical information services provider to provide up-to-date information to meet the need for the provision of in-flight information ; and (*e*) include the agreement between the applicant and an Aviation Meteorological Service Provider for the provision of Aeronautical Meteorological Services. The agreement should specify the criteria for special observations and reports and the duplication of meteorological indicators concurrently in the meteorological office and the Control Tower. The agreement should also include that the calibration of meteorological equipment used by the Air Traffic Services Provider will be in accordance with these regulations.

14.1.18. Display of Air Traffic Services Provider Certificate.

The holder of an air traffic service provider certificate shall display the certificate in a prominent place, generally accessible to the public at such holder's principal place of business and, if a copy of the original certificate is displayed, it shall produce the original to the Authority's officials, if so requested.

14.1.19. Safety Inspections and Audits.

14.1.19.1. An applicant for the issuance of an Air Traffic Service Provider certificate shall permit an air traffic service inspector to carry out such safety inspections and audits as may be necessary to verify the validity of any application made in accordance with these Regulations.

14.1.19.2. The holder of an Air Traffic Service certificate shall permit an Air Traffic Service Inspector to carry out such safety inspections and audits as may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

14.1.20. Application for Approval, Amendment or Renewal.

14.1.20.1.An applicant is eligible to become an ATS provider if he is able to comply with the requirements of these Regulations.

14.1.20.2. An application for the issuance of an ATS Provider certificate or an amendment thereof shall be made in the manner prescribed by the Authority and shall include :

(*a*) a copy of the applicant's Manual of Operations ;

(*b*) a written statement setting out air traffic services that the applicant proposes to provide ;

(*c*) enough information to identify, for each air traffic service :

(*i*) the location from which the service is proposed to be provided ;

(*ii*) if the service is to be provided within a particular airspace allocated to the applicant by the airspace authority-the airspace ;

(*iii*) if the service is to be provided for an aerodrome allocated to the applicant by the airspace authority-the aerodrome ;

(*d*) a written statement setting out the hours during which each aeronautical information service is proposed to be available ;

(*e*) a written statement describing the arrangements the applicant has made to comply with the requirements of these Regulations ;

(*f*) the appropriate fee prescribed by the Authority.

14.1.20.3. In the case of certificate renewal, the holder of a certificate shall ensure that the process for renewal is commenced at least 60 days prior to the date on which such certificate expires.

14.1.20.4. If an ATS provider's certificate is subject to conditions, the provider shall comply with the conditions so specified.

14.1.21. Issuance of ATS Certificate.

14.1.21.1. The Authority shall issue an ATS provider a certificate to provide air traffic services, if the applicant complies with the requirements prescribed in these Regulations.

14.1.21.2. The Authority shall issue the certificate in the appropriate form.

14.1.21.3. The certificate shall authorise the provision of :

(*a*) a single air traffic service by means of a single air traffic service unit ; or

(*b*) a combination of air traffic services by means of a network of air traffic service units.

14.1.21.4. An certificate issued under this Part shall include the following information :

(*a*) the provider's name and address of its principal place of business ;

(*b*) a list of the air traffic services covered by the provider's certificate ; and

(*c*) for each air traffic service :

(*i*) the location from which the service will be provided ;

(*ii*) if the service is to be provided within a particular airspace allocated to the provider by the airspace authority - the airspace ;

(*iii*) if the service is to be provided for an aerodrome allocated to the provider by the airspace authority-the aerodrome.

14.1.22. Scope and Variation of Certificate.

14.1.22.1. The holder of a certificate shall be entitled to provide any service or combination of services listed in its Manual of Operations.

14.1.22.2. If an ATS provider wants to vary its certificate, it shall apply to the Authority under this Regulation for that purpose :

(*a*) the application shall contain, or have with it, a copy of the proposed variation ;

(*b*) if the Authority approves the variation, the variation shall take effect from the day proposed by the applicant ;

(*c*) where no date is proposed by the applicant, the effective date of the variation shall be the date the certificate notice is given to the provider.

14.1.23. Period of Validity of Certificate.

14.1.23.1. A certificate shall be valid for a period determined by the Authority, which period shall not exceed five years from the date of issuance or renewal thereof.

14.1.23.2. The certificate shall remain in force until it is expired, suspended, or cancelled by the Authority.

14.1.23.3. The holder of a certificate which expires shall forthwith surrender the certificate to the Authority.

14.1.23.4. The holder of a certificate, which is suspended, shall forthwith produce the certificate to the Authority for appropriate endorsement.

14.1.23.5. The holder of a certificate, which is cancelled, shall, within 7 days from the date on which the certificate is cancelled, surrender such certificate to the Authority.

14.1.24. Transferability of Certificate.

14.1.24.1. An ATS provider certificate shall not be transferable.

14.1.24.2. A change in ownership of the holder of a certificate shall be deemed to be a change of significance that shall be notified to the Authority.

14.1.25. Suspension of Certificate.

14.1.25.1. An Air Traffic Service Provider Certificate may be suspended in the event of violation of any provision of these Regulations.

14.1.26. Suspension, Cancellation or Variation of an Air Traffic Service Provider Certificate by the Authority.

14.1.26.1. The Authority may, by written notice given to an Air Traffic Service Provider, suspend, cancel or vary the air traffic service provider certificate if there are reasonable grounds for believing that the certificate holder :

(*a*) has breached a condition of the certificate ; or

(*b*) has contravened a provision of this Part ; or

(*c*) does not meet, or continue to meet, a requirement of this Part for getting or holding the certificate ; or

(*d*) has otherwise been guilty of conduct that renders the Air Traffic Service Provider's continued holding of the certificate likely to have an adverse effect on the safety of air navigation.

14.1.26.2. Before suspending, cancelling or varying an Air Traffic Service Provider certificate, the Authority :

(*a*) shall give written notice to the certificate holder of the facts or circumstances that, in the opinion of the Authority, amount to grounds for the suspension, cancellation or variation of the certificate ;

(*b*) shall invite the certificate holder to show cause in writing, within 7 days after the date of the notice, why the certificate should not be suspended, cancelled or varied ; and

(*c*) shall take into account any written representations made, within the time allowed under paragraph (*b*), by or on behalf of the air traffic service provider explaining why the certificate should not be cancelled.

14.1.27. Right of Appeal of Holder of Certificate.

14.1.27.1. The holder of a certificate who feels aggrieved by the suspension of the certificate may appeal against such suspension to the Authority, within 7 days after such holder becomes aware of such suspension.

14.1.27.2. Procedure for the appeal shall be as prescribed in Part 1.10

14.1.28. Register of Certificates.

14.1.28.1. The Authority shall maintain a register of all Air Traffic Service certificates issued under this Part.

14.1.28.2. The register shall contain information recorded on the Air Traffic Service certificate and any other information required by the Authority.

14.1.28.3. Persons who intend to access the register of aircraft for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

14.1.29. Substitution of Air Traffic Services Provider.

14.1.29.1. The Authority may, when it considers it necessary in the interest of aviation safety, appoint the holder of an Air Traffic Service certificate as a substitute air traffic service provider to provide an air traffic service in respect of a certificate which has been suspended by the Authority under this Part, for the duration of such suspension.

14.1.30. Notice of Availability of Air Traffic Services.

14.1.30.1. An ATS provider shall provide the Aeronautical Information Service Provider details of each air traffic service that it provides in a particular airspace, or for a particular aerodrome, including the hours during which the service is available ;

14.1.30.2. An ATS provider shall inform the Aeronautical Information Service Provider about changes, interruptions or the un-serviceability of any of its air traffic services.

14.1.31. Authority to carry out Air Traffic Control Functions.

(1) A person may carry out an air traffic control function in Nigeria if, at the time the person carries out the function :

(*a*) he or she holds an ATC licence with a rating for the function and an endorsement for the place where, or the airspace in relation to which, he or she carries it out ; and

(*b*) the licence, rating and endorsement are in force ;

(*c*) he or she :

(*i*) satisfies the recency and currency requirements in relation to the endorsement ; and

(*ii*) satisfies the currency requirement in relation to the rating as specified in this regulation.

(2) A person may carry out an air traffic control function in Nigeria under the supervision of a person who meets the requirements of 14.1.31(1) ;

(3) A person who may carry out an air traffic control function in Nigeria under supervision is a person who the Authority has authorised in writing to carry out the relevant function and is ;

(*a*) a person who :

(*i*) holds an ATC licence with a rating for the function and an endorsement for the place where, or the airspace in relation to which, he or she carries it out ; but at the relevant time, in relation to the rating or endorsement, does not satisfy the recency or currency requirement ;

(*b*) a person who :

(*i*) holds an ATC licence ; and

(*ii*) carries out the function in the course of training for a rating or endorsement (whether or not the person holds a rating or endorsement at the time) ;

(*c*) a person (other than a person who held an ATC licence that has been cancelled) who :

(*i*) has completed an approved course of training in the theory of air traffic control ; and

(*ii*) carries out the function in the course of undergoing practical training for an ATC licence.

14.1.32. Rules Applicable when a Person Performs an ATC Function Under Supervision.

14.1.32.1. A person defined as a trainee whencarrying out an air traffic control function under supervision of an appropriately designated supervisorshall comply with the supervisor's directives.

14.1.32.2. The Supervisor is accountable for any deficiency in the provision of ATC during training.

14.1.33. Carrying Out ATC Function Without the Authority's Approval

14.1.33.1. A person shall not carry out ATC function in Nigeria except he or she is a holder of a valid licence issued under Part 2 of these Regulations.

14.1.33.2. A trainee shall not carry out an air traffic control function in Nigeria unless he or she is under the supervision of a person who meets the requirements of IS 14.1.33.2.

14.1.34. Provision of Air Traffic Control.

14.1.34.1. The ATS provider shall provide ATC services in accordance with the Manual of Standards.

14.1.34.2. The ATS provider shall not deviate from the standards specified by the Authority except in emergency, or other circumstance that may make the deviation necessary in the interest of safety.

14.1.34.3. As soon as practicable, the provider shall report, the deviation to the Authority, stating how long the deviation is expected to last.

14.1.34.4. An ATS provider shall ensure that the air traffic services it provides are provided in accordance with the radiotelephony procedures and the procedures for aeronautical telecommunications.

14.1.34.5. An ATS provider shall ensure that any air traffic service that it provides is provided in accordance with its Manual of Operations.

14.1.35. Authority to use ground- based Radio Equipment.

14.1.35.1. A person authorised to provide an air traffic control service shall operate, for the purpose of performing an air traffic control function, a radio-communication system used for the purpose of ensuring the safety of air navigation but not installed in or carried on an aircraft.

14.1.35.2. This paragraph applies to the following :

(*a*) a person who is authorised to carry out an air traffic control function in Nigeria ; or

(*b*) a person who is engaged by an ATS provider (whether or not as an employee), and who is acting in the course of his or her duties.

Eligibility Statement by ATS Provider for Grant of Qualification.

14.1.36. A statement of an ATS Provider ,given in accordance with procedures set out in its operations manual, that a person meets the requirements in part 2 of Nig. CARs is, in the absence of contrary evidence, sufficient evidence of that fact.

Agreement between an ATS provider and an agency providing Aeronautical Meteorological services.

14.1.37. An application for the provision of Air Traffic Services shall include the agreement between the applicant and an Aeronautical Meteorological Service Provider for the provision of Aeronautical Meteorology services. The agreement shall specify the criteria for special observations and reports and the duplication of meteorological indicators concurrently in the meteorological office and the Control Tower. The agreement shall also include that the calibration of meteorological equipment used by the Air Traffic Services Provider will be in accordance with these regulations.

Application of Human Factor principles.

14.1.38. The applicant shall demonstrate that human factors principles are considered when assessing the appropriateness of equipment, systems, software, facilities, procedures, jobs, environments, training, staffing, and personnel management to produce safe, comfortable, and effective human performance.

14.1.39. Personnel Requirement.

14.1.39.1. An applicant for the provision of ATS shall provide in its Operations Manual :

(*a*) current unit organisational chart and written delegated responsibilities and position descriptions ;

(*b*) staffing-levels for operational positions ;

(*c*) designated instructors and ratings and proficiency assessment officers ;

(*d*) staffing numbers and qualifications at unit level ; and

(*e*) policy and procedures document for determining the capacity of the Air Traffic Services system, including the number of operational staff required to ensure the provision of an adequate Air Traffic Services system.

14.1.39.2. An ATS provider shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the air traffic services covered by its certificate.

14.1.39.3. An ATS provider shall have, at all times, enough suitably qualified and trained personnel to enable it provide, in accordance with the standards set out in the Regulations, the air traffic services covered by its certificate.

14.1.39.4. The ATS provider shall ensure that its personnel are of sufficient numbers and experience and have been given appropriate authority to be able to discharge their allocated responsibilities.

14.1.39.5. The ATS provider shall advise the minimum qualifications required for air traffic services personnel operating positions.

14.1.39.6. An ATS provider shall arrange the work flow schedule of air traffic controllers to provide duty rest periods. A copy of the ATS providers fatigue management procedure is to be included in the Manual of Operations.

14.1.39.7. An air traffic controller shall not exercise the privileges of his license if he knows or suspects that he is suffering from or having regards to the circumstances of the period of duty to be undertaken is likely to suffer from such fatigue as may endanger the safety of any aircraft to which an air traffic control service is provided.

14.1.39.8. A person shall not when exercising the privileges of an air traffic controller's licence be under the influence of alcohol or a drug to the extent as to impair his capacity to exercise such privileges.

14.1.39.9. At the unit level the ATS provider shall engage, employ or contract :

(*a*) a senior person to whom authority has been granted to ensure that all activities undertaken by the unit are carried out in accordance with the applicable requirements prescribed in this section, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements ;

(*i*) unrestricted access to work performed or activities undertaken by all other persons as employees of, and other persons rendering service within the unit ;

(*ii*) full rights of consultation with any such person(s) in respect of such compliance by him or her ;

(*iii*) powers to order cessation of any activity where such compliance is not effected ;

(*iv*) a duty to establish liaison mechanisms with the Authority with a view to ascertain correct manners of compliance with the said requirements, and interpretations of such requirements by the Authority, and to facilitate liaison between the Authority and the unit concerned ; and

(*v*) powers to report directly to the management of his or her organisation, on his or her investigations and consultations generally, and in cases contemplated in sub-paragraph (*iii*), and with regard to the results of the liaison contemplated in sub-paragraph (*iv*) ;

(*b*) a person who is responsible for safety management system and quality control, and who shall have direct access to the person referred to herein on matters affecting aviation safety ; and

(*c*) enough licensed personnel to plan, provide and supervise the services listed in its approval as a service provider, in a safe and efficient manner.

14.1.40. Training and Checking of ATS Personnel.

The ATS provider shall establish a procedure for initially assessing, and a procedure for maintaining the competence of the personnel required to operate and maintain the unit concerned. This shall include relevant assessment forms.

14.1.41. Granting of Ratings and Endorsements.

Refer to Part 2 of the Nig. CARs

14.1.42. Periods of Validity of Ratings and Endorsements.

Refer to Part 2 of the Nig. CARs

14.1.43. Proficiency.

14.1.43.1. As part of the quality system, the holder of an air traffic service unit certificate shall assess the air traffic service personnel in their employment.

14.1.43.2. A formal proficiency assessment shall be carried out before a validation certificate or a rating validation can be issued to assess whether the applicant has achieved the required level of competence.

14.1.43.3. At each facility the ATS provider shall nominate a person to establish and maintain unit proficiency standards; specific senior officers are to be appointed and tasked by the person responsible for the service as proficiency assessment officers for each discipline; at units where operational staff are multi-disciplined, the person responsible for the service shall appoint and task at least one proficiency assessment officer. Proficiency assessment officers may be appointed and tasked for each discipline although it is a multi-discipline environment.

14.1.43.4. At approach and/or aerodrome units, the Air Traffic Service provider shall appoint and task the officer or air traffic controller responsible for satellite units as the proficiency assessment officer.

14.1.43.5. A person assessed as unsatisfactory shall not be permitted to continue in the assessed discipline without supervision. If after a reasonable period a person is unable to pass the proficiency check, all details pertaining to the unsatisfactory assessment shall be assembled and sent to the Authority.

14.1.43.6. Proficiency assessment officers shall prepare proficiency check rosters so that all operational staff are screened on a regular basis. Personnel shall be given advanced notice of a real time annual proficiency check so that adequate preparation, mentally and functionally, can be made.

14.1.43.7. In addition, the Authority shall carry out a formal assessment at least every 12 months to determine whether all operational personnel are maintaining the required level of competence in the positions for which a valid rating is held. Routine assessments should be conducted on an on-going basis during duty assignment.

14.1.43.8. Personnel shall be assessed in key elements of the performance areas detailed on an assessment form.

14.1.43.9. An assessment shall be made of both the quality of work and the level of knowledge of the elements assessed.

14.1.43.10. Manual of Operations shall also include the procedures for :

(*a*) air traffic services personnel to undertake remedial training ; and (*b*) updating air traffic services personnel skills when introducing new equipment into service and updated communications.

14.1.43.11. Proficiency and training records shall be maintained for all air traffic services personnel.

14.1.44. ATS provider's obligation to provide currency and recency training and assessment.

14.1.44.1. An ATS provider shall set up and maintain, in accordance with the Manual of Standards, programmes for :

(*a*) continuing assessment of its employees' competency for the purposes of ensuring that they continue to satisfy the currency requirements in relation to ratings and endorsements ; and

(*b*) familiarisation, retraining and assessment of any of its employees who at any time do not satisfy the currency or recency requirement in relation to an endorsement.

14.1.44.2. The provider shall include details of the programme, including necessary training and tests of competency, in its operations manual.

Conduct of Practical Training. .

14.1.45. An ATS provider shall ensure that practical training carried out on their behalf, for the award of an ATC licence, rating, endorsement or ATC qualification, is carried out in accordance with :

(*a*) the standards and requirements set out in the Manual of Standards ; and

(*b*) the provider's operations manual.

Safety Management System.

14.1.46. An ATS provider shall implement a safety management system acceptable to the Authority as prescribed in Nig.CARs Part 20;

14.1.47 Contingency Plan.

14.1.47.1. An ATS provider shall develop and maintain Contingency Plans for implementation in the event of disruption, or potential disruption, of air traffic services and related supporting services in the airspace for which it is responsible. The disruption may be caused intentionally (sabotage) or unintentionally (equipment failure). Other causes may include civil unrests, industrial disputes, natural disasters, public health emergencies, military conflicts or acts of unlawful interference with civil aviation.

14.1.47.2. In developing such contingency plans, the ATS provider shall liaise closely with the air traffic services authorities responsible for the provision of services in adjacent or contiguous airspaces and other airspace users concerned.

14.1.47.3. The plan shall include :

(*a*) the actions to be taken by the members of the provider's personnel responsible for providing the service including the notification of suspected communicable diseases, or other public health risk, on board an aircraft in accordance with IS 14.1.47.3

(*b*) possible alternative arrangements for providing the service ; and

(*c*) the arrangements for resuming normal operations for the service.

14.1.47.4. These plans shall be submitted as part of the Manual of Operations.

14.1.48. Security Programme.

The applicant shall provide a plan that details what measures, both physical and procedural, that they have in place to protect the facility and the services provided from that facility. This should include a security assessment of the facilities used by the applicant.

14.1.49. Facilities, Equipment, Maintenance and Calibration.

14.1.49.1. An ATS provider shall, at all times, make available for the use by its personnel, the equipment and facilities necessary for providing air traffic services covered by its certificate.

14.1.49.2. The ATS provider shall include in the Operations Manual a list of facilities from which ATS will be provided as contained in IS 14.1.49.2.

14.1.49.3. The equipment shall meet with the requirements and calibration standards specified in these Regulations.

14.1.49.4. All persons involved with the provision of maintenance shall be fully conversant with standards and practices, instructions, directives and relevant information as contained in these regulations.

14.1.49.5. The ATS provider shall describe the processes for the installation, commissioning and transition into service phases of new facilities, equipment and services, and provide evidence, for acceptance of the operational performance and the safety of the facility, equipment, procedure or service.

14.1.50. Control Tower.

If the provider uses a control tower in providing an air traffic service, the provider shall ensure the control tower is designed, sited, constructed and maintained in accordance with the standards set out for its construction as detailed in IS 14.1.50 (1-3).

14.1.51. Fault and Defect Reporting.

14.1.51.1. The applicant shall develop and maintain a system for tracking and rectifying faults within the ATS system.

14.1.51.2. Procedures for the reporting and the resolution of faults and defects shall be documented in the Manual of Operations.

14.1.51.3. The ATS provider shall maintain a record of the number of reported equipment faults on a monthly basis.

14.1.52. Maintenance of Documents.

14.1.52.1. The applicant for a service provider certificate shall provide the operational documentation listed in IS 14.1.52.1.in a location at an air traffic service unit.

14.1.52.2. The ATS provider shall ensure that :

(*a*) the documentation is reviewed and authorised by appropriate personnel before issue ;

(*b*) current issues of relevant documentation are available to personnel ;

(*c*) obsolete documentation is removed from all points of issue or use ;

(*d*) changes to documentation are reviewed and approved by appropriate personnel ; and

(*e*) the current version of each document can be identified to preclude the use of obsolete editions.

14.1.52.3. The ATS provider shall demonstrate that there is a system in place to record and retain operational data.

Maintenance of Records.

14.1.53. Records shall be maintained on the following :

(*a*) regular reports and returns to the Authority as specified in the Manual of Standards ;

(*b*) local incidents with remedial actions ;

(*c*) personnel files including supervisory reports ;

(*d*) training files ;

(*e*) licence and medical validity details ;

(*f*) minutes of staff, aerodrome maintenance, bird control, emergency planning and other committee meetings ;

(*g*) rosters and roster keys ; and

(*h*) leave records.

14.1.54. STATISTICS

14.1.54.1. The ATS provider shall submit to the Authorityaircraft and passenger movement data on a monthly basis. This information is to be submitted at the end of each calendar month.

14.1.54.2. The ATS provider shall provide the Authority a summary of incident and accident data on a monthly basis. This information is to be submitted at the end of each calendar month.

14.1.55. AERONAUTICAL SEARCH AND RESCUE RESPONSIBILITIES

Aeronautical search and rescue is to be provided in accordance with the ATS providers Aeronautical search and rescue Manual as approved by the Authority.

14.1.56. LOCAL AIR TRAFFIC CONTROL INSTRUCTIONS (LATCI) MANUAL

14.1.56.1.The holder of an air traffic services provider certificate shall provide each air traffic services unit listed in its Manual of Operations , a local air traffic control manual which :

(*a*) sets out the procedures for the operation of the air traffic services unit concerned ; and

(*b*) contains the information as prescribed in the Requirements of these Regulations. For contents of LATCI see IS 14.1.56.1.

14.1.56.2. The local air traffic control instructions manual shall not be seen in isolation but rather as the document necessary to provide the interface between peculiarities of a particular unit and the various source documents, and does not relieve air traffic service personnel from the responsibility of being familiar with and the application of procedures laid down in the following documents :

(*a*) Aeronautical Information Publication, AIP supplements, AIC and NOTAMs ;

(*b*) Civil Aviation Act 2006 ;

(*c*) Nigeria Civil Aviation Regulations ;

(*d*) Manual of Standards ; and

(*e*) Relevant ATM documents.

14.1.57. External Data Sources

14.1.57.1. An ATS provider shall consider the availability, reliability and integrity of external data sources required to provide Air Traffic Service including the means of receipt and display of the following information :

(*a*) AIS ;

(*b*) AFTN messages ;

(*c*) NOTAMs ;

(*d*) Flight notification ;

(*e*) Meteorological information ;

(*f*) Meteorological warning service ;

(*g*) Voice coordination with adjacent ATS providers ;

(*h*) Information on aerodrome conditions and the operational status of facilities and navigation aids ;

(*i*) Aerodrome works and administration coordination ;

(*j*) ARFFS coordination ;

(*k*) Local and remote radar ;

(*l*) Information on unmanned balloons ;

(*m*) Information concerning volcanic activity ; and

(*n*) Information concerning radioactive material and toxic chemical clouds.

14.1.58. Output Data

14.1.58.1. The ATS provider shall provide a description of the arrangements made or proposed to be made by the applicant to ensure that it can, and will continue to be able to provide the information in relation to its air traffic services to other organizations whose functions reasonably require that information.

14.1.58.2. Data recipients shall include :

(*a*) AIS ;

(*b*) Adjacent ATS providers ;

(*c*) Aerodrome administration ;

(*d*) ARFFS ;

(*e*) Military ;

(*f*) The Aeronautical Telecommunications provider ; and

(*g*) Other Government agencies.

14.1.59.—(1) An ATS provider may grant an ATC licence holder an ancillary qualification certifying that the holder is competent to perform a particular ancillary function in accordance with the provisions of MOS 13.11.6.

Ancillary Qualifications.

(2) An ancillary qualification holder who is to perform his/her authorized functions that will lead to the grant/renewal of an ATC licence/rating shall have met the requirements of Part 2.7.3.2(*f*)(3) of these Regulations.

14.1.60. Amendments to LATCI.

14.1.60.1. Amendments to the LATCI manual shall be done as prescribed in IS 14.1.56 and recorded in the document and brought to the attention of all concerned.

14.2.1. Procedure Design Certificate

A procedure design certificate is a certificate that :

(*a*) is granted by the Authority to a person under this Part ; and

(*b*) certifies that the person is authorised to carry on design work on a terminal instrument flight procedure of a type covered by the certificate subject to any conditions set out in the certificate.

14.2.1.1. This subpart of the regulations shall be applicable Non-precision, precision approaches and all PBN procedures.

14.2.2. Requirement for Procedures Design Certificate.

14.2.2.1. No person or organisation, shall design procedures for air navigation services or publish such procedures for air navigation services in Nigerian airspace and aerodromes unless such person or organization belongs to any of the under mentioned categories and holds a certificate issued by the Authority in accordance with this section :

(*a*) the person or organisation is established as a procedure designer ; or

(*b*) the person or organisation has a co-operation arrangement with a designated procedure designer for air navigation services ; or

(*c*) there is a commercial agreement with a designated procedure designer for air navigation services.

14.2.2.2. An application for procedures design certificate shall be made in the form specified in IS.14.2.2.2.

14.2.3. Privileges of a Procedures Design Certificate Holder. A certificate for procedures design for air navigation issued under these regulations authorises the person or organisation to carry out any of the following activities subject to any conditions set out in the certificate to the person or organisation :

(*a*) review or amend a instrument flight procedure that is of a type covered by the authorisation and is for use by any aircraft operating under the IFR at, or in the vicinity of, an aerodrome in Nigeria ;

(*b*) carry out design work on a instrument flight procedure that is of a type covered by the authorisation and is for use by any aircraft operating under the IFR at, or in the vicinity of, an off-shore installation located no closer than 30 nm from the nearest land.

14.2.4. The holder of a procedures design certificate shall :

(*a*) provide the services listed in its Manual of Operations, in accordance with the procedures as prescribed in these Regulations ;

(*b*) Submit Manual of Operations which shall include the following information :

(*i*) personnel requirements and the responsibilities of personnel as specified in IS. 14.2.4.1.

(*ii*) training and checking of staff and how that information is tracked ;

(*iii*) quality assurance and safety management system ;

(*iv*) contingency plans developed for part or total system failure for which the organisation proves a service ;

(*v*) security plan ;

(*vi*) facilities and equipment and how those facilities are maintained ;

(*vii*) fault and defect reporting ;

(*viii*) maintenance of documents and records ;

(*ix*) conduct system verification prior to implementation ;

(*x*) ensure continuous monitoring and periodic assessment of any new system related to ATM , and

(*xi*) any other information requested by the Authority.

(*c*) comply with all procedures detailed in its Manual of Operations, the Manual of Standards as prescribed by the Authority, in the provision of procedures design for air navigation services ;

(*d*) make each applicable part of the Manual of Operations available to the personnel who require those parts to carry out their duties ;

(*e*) continue to comply with the appropriate requirements prescribed in these Regulations ;

(*f*) keep the records of all regular internal inspections for a period of one years from the date of each inspection ;

14.2.5. The holder of a procedures design certificate shall display the certificate in a prominent place, generally accessible to the public at the holder's principal place of business and, if a copy of the original certificate is displayed, it shall produce the original to the Authority's officials, if so requested.

14.2.6. SAFETY INSPECTIONS AND AUDIT.

14.2.6.1. An applicant for the issuance of procedures design certuificateshall permit an inspector to carry out such safety inspections and audits as may be necessary to verify the validity of any application made in accordance with these Regulations.

14.2.6.2. The holder of procedures design certificate holder shall permit a procedures design inspector to carry out such safety inspections and audits as may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

14.2.7. APPLICATIONS FOR CERTIFICATE, AMENDMENT OR RENEWAL.

14.2.7.1. An applicant is eligible to become a procedures designer if the applicant is able to comply with the requirements of these Regulations as outlined in IS 14.2.7.1.

14.2.7.2. An application for the issuance of procedures design Certificate, or an amendment thereof shall be made in the manner prescribed by the Authority and shall include :

(*a*) a copy of the applicant's Manual of Operations ;

(*b*) a written statement setting out design procedures that the applicant proposes to provide ;

(*c*) enough information to identify, for each procedure design :

(*i*) the location for which the service is proposed to be provided ;

(*ii*) if the service is to be provided within a particular airspace-the airspace ;

(*iii*) if the service is to be provided for an aerodrome-the aerodrome ;

(*e*) a written statement describing the arrangements the applicant has made to comply with the requirements of these Regulations ;

(*f*) the appropriate fee prescribed by the Authority.

14.2.7.3. In the case of certificate renewal, the holder of a certificate shall ensure that the process for renewal is commenced at least 60 days prior to the date on which such approval expires ;

14.2.7.4. If a procedures design certificate is subject to conditions, the holder shall comply with the conditions so specified.

14.2.8. ISSUANCE OF PROCEDURES DESIGN CERTIFICATE

14.2.8.1. The Authority shall issue a procedure design certificate for air navigation service provider, if the applicant complies with the requirements prescribed in these Regulations.

14.2.8.2. The Authority shall issue the certificate in the appropriate form.

14.2.8.3. The certificate shall authorise the provision of procedure design in all the phases of flights

14.2.8.4. A certificate issued under this Part shall include the following information :

(*a*) the provider's name and address of its principal place of business ;

(*b*) a list of the procedure design services covered by the provider's approval ; and

(*c*) for each procedure design service provider the type of service that is proposed to be provided.

14.2.9. SCOPE AND VARIATION OF CERTIFICATE

14.2.9.1. The holder of a certificate shall be entitled to provide any service or combination of services listed in its Manual of Operations ;

14.2.9.2. If a procedure design certificate holder wants to vary its certificate, it shall apply to the Authority under this Regulation for that purpose :

(*a*) the application shall contain, or have with it, a copy of the proposed variation ;

(*b*) if the Authority approves the variation, the variation shall take effect from the day proposed by the applicant ;

(*c*) where no date is proposed by the applicant, the effective date of the variation shall be the date the certificate notice is given to the provider.

14.2.10. PERIOD OF VALIDITY OF L CERTIFICATE.

14.2.10.1. A certificate shall be valid for a period determined by the Authority, which period shall not exceed five years from the date of issuance or renewal thereof.

14.2.10.2. The certificate shall remain valid unless it is expired, suspended, or cancelled by the Authority.

14.2.10.3. The holder of a certificate which expires, shall forthwith surrender the certificate to the Authority ;

14.2.10.4. The holder of a certificate, which is suspended, shall forthwith produce the certificate to the Authority for appropriate endorsement.

14.2.10.5. The holder of a certificate, which is cancelled, shall, within 7 days from the date on which the certificate is cancelled, surrender such certificate to the Authority.

14.2.11. Transferability of Certificate.

14.2.11.1. A Procedure Design certificate shall not be transferable.

14.2.11.2. A change in the ownership of the certificate holder shall be deemed to be a change of significance that shall be notified to the Authority.

Suspension of Certificate.

14.2.12. A Procedure Design Certificate may be suspended in the event of violation of any provision of these Regulations :

Suspension, Cancellation or Variation of Procedures design Certificate by the Authority.

14.2.13. The Authority may, by written notice given to a Procedure Design Certificate holder, suspend, cancel or vary the certificate if there are reasonable grounds for believing that the certificate holder :

(*a*) has breached a condition of the certificate ; or

(*b*) has contravened a provision of this Part ; or

(*c*) does not meet, or continue to meet, a requirement of this Part for getting or holding the certificate ; or

(*d*) has otherwise been guilty of conduct that renders the Procedure Design Certificate holder's continued holding of the certificate likely to have an adverse effect on the safety of air navigation.

14.2.14.2. Before suspending, cancelling or varying a procedures design certificate, the Authority shall :

(*a*) give written notice to the certificate holder of the facts or circumstances that, in the opinion of the Authority, amount to grounds for the suspension, cancellation or variation of the certificate ; and

(*b*) invite the certificate holder to show cause in writing, within 30 days after the date of the notice, why the certificate should not be suspended, cancelled or varied ; and

(*c*) take into account any written representations made, within the time allowed under paragraph 14.2.14.2 (*b*), by or on behalf of the procedure design for air navigation service provider explaining why the certificate should not be cancelled.

14.2.15. Right of Appeal of Holder of Certificate

14.2.15.1. The holder of a certificate who feels aggrieved by the suspension of the certificate may appeal against such suspension to the Authority, within 7 days after such holder becomes aware of such suspension.

14.2.15.2. Procedure for the appeal shall be as prescribed in Part 1.10

14.2.16. Register of Certificates

14.2.16.1. The Authority shall maintain a register of all Procedure design certificates issued under this Part.

14.2.16.2. The register shall contain information recorded on the Procedures design certificate and any other information required by the Authority.

14.2.16.3. A persons who intend to access the register of aircraft for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority

Substitution of Procedures Design Certificate. Holder.

14.2.17. The Authority may, when it considers it necessary in the interest of aviation safety, appoint the holder of a Procedures design certificate as a substitute to design procedures in respect of a Certificate which has been suspended by the Authority under this part, for the duration of such suspension.

14.2.18. Verification of Flight Procedures

14.2.18.1. A Procedures Design Certificate Holder shall establish procedures for verifying flight procedures that it is authorised to design under the designer's procedure design certificate or on which the designer is authorised to carry on design work.

14.2.18.2. The verification procedures shall :

(*a*) provide for 2 qualified designers to check independently the design of each flight procedure designed, or on which design work is carried on, under the Procedures Design Certificate.

(*b*) provide for one of those checks to be made by a qualified designer who did not carry on the design work concerned.

14.2.18.3. The process of verifying a flight procedure shall include checking the procedure (all data, computations and drawings) in accordance with IS14.2.18.3.

14.2.19. A Procedures Design Certificate Holder shall ensure that each flight procedure designed under the designer's certificate is validated by the Authority in accordance with IS14.2.19.- to be provided by DAAS

Validation of Flight Procedures.

14.2.20. Publication of Flight Procedures.

14.2.20.1. A Procedures Design Certificate Holder shall ensure that each flight procedure designed under the designer's certificate is given to the AIS for publication in the AIP together with a certification by the Certificate Holder to the effect that the procedure is designed and validated in accordance with IS14.2.19.- to be provided by DAAS

14.2.20.2. The Procedures Design Certificate holder need not give a flight procedure to the AIS if the procedure is for use only by an aircraft in a localized helicopter operation.

14.2.20.3. A Procedures Design Certificate Holder shall ensure that all procedures designed under its procedure design certificate that are not given to the AIS for publication in the AIP are given to the Authority.

14.2.21. A Procedures Design Certificate shall ensure that a flight procedure designed under the designer's certificate does not require the use of a ground-based radio-navigation aid other than one that is operated and maintained by a person certificated to do so under these Regulations.

Radio Navigation Aids.

14.2.22. Maintenance of Instrument Flight Procedures

14.2.22.1. A Procedures Design Certificate holder shall be responsible for maintaining Instrument Flight Procedures in accordance with the standards contain in IS 14.2.22.1 .- to be provided by DAAS.

14.2.22.2. The Procedures Design Certificate Holder shall cease to be responsible for the maintenance of the procedures if :

(*a*) the Procedures Design Certificate Holder's responsibility for the maintenance of the procedure is transferred to another Procedures Design Certificate Holder on the day when the responsibility is transferred ; or

(*b*) the Procedures Design Certificate Holder has notified the Authority that the designer has ceased to design the type of flight procedures concerned and the Authority will withdraw the flight procedure from use ; or

(*c*) the Procedures Design Certificate is cancelled or varied to exclude that type of procedures and there is no responsible Design certificate holder for the flight procedure, Authority will withdraw the flight procedure from use

14.2.23. Application of Human Factor principles.

14.2.23.1. The Certificate holder shall demonstrate that human factor principles are applied when assessing the appropriateness of equipment, systems, software, facilities, procedures, tasks, environment, training, staffing, and personnel management.

14.2.23.2. The Certificate holder shall ensure the application of human factor principles in the performance of his duties under these Regulations.

14.2.24. Training and Checking of Procedures Design Certificate Holder's Personnel.

14.2.24.1. A Procedures Design Certificate Holder shall provide training and checking program that is of an adequate standard to ensure that the employees of the designer maintain their competence and are provided with ongoing training appropriate to their duties.

14.2.24.2. Training and checking records shall be maintained for all personnel.

14.2.25. Reserved

14.2.26. Facilities, Equipment, Maintenance and Calibration.

14.2.26.1. A Procedures Design Certificate Holder shall provide and maintain adequate facilities for carrying on design work on flight procedures under the designer's procedure design certificate, including :

(*a*) providing premises and equipment appropriate for the Procedures Design Cerificate Holder's employees to carry on the design work ;

(*b*) ensuring that those personnel have access to all necessary data for designing the procedures including :

(*i*) accurate and current databases or charts detailing terrain and obstacle information ; and

(*ii*) accurate and current navigation aid co-ordinate data ;

(*iii*) accurate and current aerodrome reference point and threshold data, and

(*iv*) acceptable software and topographical map of the area with an appropriate scale.

14.2.26.2. A Procedures Design Certificate Holder shall, if an aeronautical database and aeronautical data are required for designing an instrument flight procedure under the designer's procedure design certificate, have procedures to ensure the integrity of the database and the data.

14.2.27. Fault and Defect detection.

14.2.27.1 The Certificate holder shall maintain a system for tracking and rectifying faults within the Certificate Holder's system.

14.2.27.2. Procedures for the resolution of faults and defects shall be documented in its Manual of Operations.

14.2.28. Maintenance of Documents and Records.

14.2.28.1. A Procedures Design Certificate Holder shall maintain reference materials of the kinds specified in IS14.2.28.1-IS to be developed by DAAS.

14.2.28.2. A Procedures Design Certificate Holder shall keep the reference materials up-to-date and in a readily accessible form.

14.2.28.3. Each personnel of the Procedures Design Certificate Holder who carries out design work on a flight procedures under the holder'sdesign certificate shall have ready access to the reference materials.

14.2.28.4. A Procedures Design Certificate Holder shall keep documents and records of the kinds specified in IS14.2.28.1-IS to be developed by DAAS.

14.2.28.5. The Certificate Holder shall demonstrate that there is a system in place to record and retain operational data.

14.2.28.6. The designer shall, at the Authority's request, make the documents and records, or copies of them or extracts from them, available for inspection by the Authority.

14.2.28.7. A Procedures Design Certificate Holder shall establish, and put into effect, a system for controlling documents and records relating to the instrument flight procedures on which the designer carries on design work including the policies and procedures for making, amending, preserving and disposing of those documents and records.

14.2.28.8. The system shall be in accordance with the standards set out in the Manual of Standards.-DAAS to provide MOS reference.

14.2.28.9. The Procedures Design Certificate Holder shall ensure that :

(*a*) the documentation is reviewed and authorised by appropriate personnel before issue ;

(*b*) current issues of relevant documentation are available to personnel ;

(c) obsolete documentation is removed from all points of issue or use ;

(*d*) changes to documentation are reviewed and approved by appropriate personnel ; and

(*e*) current version of each document can be identified to preclude the use of obsolete documents.

14.3. AERONAUTICAL SEARCH AND RESCUE

14.3.1. ORGANISATION

Aeronautical search and rescue services.

14.3.1.1. Nigerian Airspace Management Agency (NAMA) is the ANSP responsible for the coordination of Aeronautical search and rescue Services within the Nigerian Airspace.

14.3.1.2 NAMA shall, individually or in co-operation with other States, arrange for the establishment and prompt provision of aeronautical search and rescue services within Nigerian territory to ensure that assistance is rendered to persons in distress. Such services shall be provided on a 24-hour basis.

14.3.1.3. Portions of the high seas or areas of for which aeronautical search and rescue services will be established shall also be covered fully. NAMA, shall solely or in cooperation with other States, arrange for the services to be established and provided in accordance with the provisions of these Regulations.

14.3.1.4. Basic elements of aeronautical search and rescue services shall include a legal framework, a responsible authority, organized available resources, communication facilities and a workforce skilled in coordination and operational functions.

14.3.1.5. NAMA's Aeronautical search and rescue services shall establish processes to improve service provision, including the aspects of planning, domestic and international cooperative arrangements and training.

14.3.1.6. In providing assistance to aircraft in distress and to survivors of aircraft accidents, NAMA shall do so regardless of the nationality or status of such persons or the circumstances in which such persons are found.

14.3.1.7. NAMA, shall use aeronautical search and rescue units and other available facilities to assist any aircraft or its occupants that are or appear to be in a state of emergency.

14.3.1.8. Where separate aeronautical and maritime rescue coordination centres serve the same area NAMA shall ensure the closest practicable coordination between the centres.

14.3.1.9. NAMA shall establish joint rescue coordination centres to coordinate aeronautical and maritime aeronautical search and rescue operations, where practical.

14.3.2. Aeronautical Search and Rescue Regions

14.3.2.1. NAMA shall delineate the aeronautical search and rescue regions within which they will provide aeronautical search and rescue services. Such regions shall not overlap and neighbouring regions shall be contiguous.

14.3.2.2. Aeronautical search and rescue regions shall, in so far as practicable, be coincident with corresponding flight information regions and, with respect to those areas over the high seas, maritime aeronautical search and rescue regions.

14.3.2.3. Where all or part of the airspace of Nigeria is included within an aeronautical search and rescue region associated with a rescue co-ordination centre in another Contracting State, NAMA shall establish a rescue subcentre subordinate to the rescue co-ordination centre wherever this would improve the efficiency of aeronautical search and rescue services within its territory.

14.3.2.4. NAMA shall ensure that personnel engaged in SAR operations is sufficient in number and adequately trained in addition to ensuring participation in annual mock SAR exercises.

(*a*) NAMA shall adequately define all the functions and responsibilities of SAR personnel in addition to properly defined job descriptions ;

(*b*) Training records of SAR personnel shall be properly maintained ;

(*c*) NAMA shall ensure that rescue co-ordination centre personnel are proficient in the use of English Language as contained in Nigeria CARs, Part 2.

14.3.2.5. The Authority shall monitor the exercise and assess the level of preparedness for aeronautical search and rescue operations.

14.3.2.6. NAMA shall ensure that qualified personnel are deployed to co-ordinate aeronautical search and rescue operations at the scene of an accident.

14.3.2.7. Aeronautical search and rescue action shall be undertaken in accordance with the National Disaster Response Plan issued by the National Emergency Management Agency and NAMA's Aeronautical search and rescue Manual, as approved by the Authority.

14.3.3. Rescue Co-ordination Centers(RCC) and Sub-centers.

14.3.3.1. Each rescue co-ordination centre and, as appropriate, rescue sub-center, shall be staffed 24 hours a day by trained personnel proficient in the use of the language used for radiotelephony.

14.3.3.2. RCC personnel involved in the conduct of radiotelephony communications shall be proficient in the use of the English language.

14.3.3.2. Each Control Tower shall be equipped with a reliable alerting device for alerting the fire and safety services and other relevant agencies.

14.3.3.3. NAMA shall issue guidelines for the establishment of Rescue Co-ordination Centres and Rescue sub-centres including Personnel and Equipment requirements and also guidelines for Aerodrome emergencies of Air Traffic Services at each Aerodrome.

14.3.3.4. Rescue Co-ordination Centres and sub centers shall be provided with facilities and equipment for locating scenes of the incident/accident promptly.

14.3.4. Aeronautical search and rescue communications.

14.3.4.1. Each rescue co-ordination centre shall have means of rapid and reliable two way communication with :

(*a*) associated air traffic services units ;

(*b*) associated rescue subcentres ;

(*c*) appropriate direction-finding and position-fixing stations ;

(*d*) where appropriate, coastal radio stations capable of alerting and communicating with surface vessels in the region ;

(*e*) the headquarters of aeronautical search and rescue units in the region ;

(*f*) all maritime rescue co-ordination centres in the region and aeronautical, maritime or joint rescue coordination centres in adjacent regions ;

(*g*) a designated meteorological office or meteorological watch office ;

(*h*) aeronautical search and rescue units ;

(*i*) alerting posts ; and

(*j*) the Cospas-Sarsat Mission Control Centre servicing the aeronautical search and rescue region.

14.3.4.2. Each rescue subcentre shall have means of rapid and reliable two-way communication with :

(*a*) adjacent rescue subcentres ;

(*b*) a meteorological office or meteorological watch office ;

(*c*) aeronautical search and rescue units ; and

(*d*) alerting posts.

14.3.4.3. NAMA shall provide, when necessary, assistance to other Rescue Co-ordination Centres, including assistance in the form of aircraft, vessels, persons or equipment.

14.3.5. Aeronautical Search and Rescue Units

14.3.5.1. NAMA shall designate as aeronautical search and rescue units elements of public or private services suitably located and equipped for aeronautical search and rescue operations.

14.3.5.2. NAMA shall designate as parts of the aeronautical search and rescue plan of operation, elements of public or private services that do not qualify as aeronautical search and rescue units but are nevertheless able to participate in aeronautical search and rescue operations.

14.3.6. Aeronautical Search and Rescue Equipment

14.3.6.1. Aeronautical search and rescue units shall be provided with equipment for locating promptly, and for providing adequate assistance at, the scene of an accident.

14.3.6.2. Each aeronautical search and rescue unit shall have means of rapid and reliable two-way communication with other aeronautical search and rescue facilities engaged in the same operation.

14.3.6.3. Each aeronautical search and rescue aircraft shall be equipped to be able to communicate on the aeronautical distress and on-scene frequencies and on such other frequencies as may be prescribed.

14.3.6.4. Each aeronautical search and rescue aircraft shall be equipped with a device for homing on distress frequencies.

14.3.6.5. Each aeronautical search and rescue aircraft, when used for aeronautical search and rescue over maritime areas, shall be equipped to be able to communicate with vessels.

14.3.6.6. Each aeronautical search and rescue aircraft, when used for aeronautical search and rescue over maritime areas shall carry a copy of the International Code of Signals to enable it to overcome language difficulties that may be experienced in communicating with ships.

14.3.6.7. Unless it is known that there is no need to provide supplies to survivors by air, at least one of the aircraft participating in an aeronautical search and rescue operation shall carry droppable survival equipment.

14.3.6.8. NAMA shall locate, at appropriate aerodromes, survival equipment suitably packed for dropping by aircraft.

14.3.7. Cooperation between States

14.3.7.1. NAMA shall coordinate its aeronautical search and rescue organization with those of neighbouring States.

14.3.7.2. NAMA shall, whenever necessary, co-ordinate its aeronautical search and rescue operations with those of neighbouring States especially when these operations are proximate to adjacent aeronautical search and rescue regions.

14.3.7.3. NAMA shall, in so far as practicable, develop common aeronautical search and rescue plans and procedures to facilitate co-ordination of aeronautical search and rescue operations with those of neighbouring States.

14.3.7.4. Subject to such conditions as may be prescribed by its Nigeria, NAMA shall permit immediate entry into its territory of aeronautical search and rescue units of other States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.

14.3.7.5. Any foreign or neighbouring Air Traffic Services Provider who wishes its aeronautical search and rescue units to enter the territory of Nigeria for aeronautical search and rescue purposes shall transmit a request, through NAMA to the Authority, giving full details of the projected mission and the need for it.

14.3.7.6. The Authority shall :

(*a*) immediately acknowledge the receipt of such a request ; and

(*b*) as soon as possible, indicate the conditions, if any, under which the projected mission may be undertaken ;

(*c*) liaise with NAMA to take immediate action.

14.3.7.7. NAMA shall enter into agreements with neighbouring States to strengthen aeronautical search and rescue co-operation and co-ordination, setting forth the conditions for entry of each other's aeronautical search and rescue units into their respective territories. These agreements shall also provide for expediting entry of such units with the least possible formalities.

14.3.7.8. NAMA shall authorize its rescue co-ordination centres to :

(*a*) request from other rescue coordination centres such assistance, including aircraft, vessels, persons or equipment, as may be needed ;

(*b*) grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory ; and

(*c*) make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.

14.3.7.9. NAMA shall authorize its rescue co-ordination centres to provide, when requested, assistance to other rescue co-ordination centres, including assistance in the form of aircraft, vessels, persons or equipment.

14.3.7.10. NAMA shall make arrangements for joint training exercises involving its aeronautical search and rescue units, those of other States and operators, in order to promote aeronautical search and rescue efficiency.

14.3.7.11 NAMA shall make arrangements for periodic liaison visits by personnel of their rescue co-ordination centres and subcentres to the centres of neighbouring States.

14.3.8. COOPERATION WITH OTHER SERVICES

14.3.8.1. NAMA shall arrange for all aircraft, vessels and local services and facilities which do not form part of the aeronautical search and rescue organization to cooperate fully with the latter in aeronautical search and rescue and to extend any possible assistance to the survivors of aircraft accidents.

14.3.8.2. NAMA shall ensure the closest practicable co-ordination between its aeronautical search and rescue unit and maritime authorities to provide for the most effective and efficient aeronautical search and rescue services.

14.3.8.3. NAMA shall ensure that its aeronautical search and rescue unit co-operate with the agency responsible for aircraft accident investigation and with those responsible for the care of those who suffered from the accident.

14.3.8.4. NAMA, in order to facilitate accident investigation, shall ensure that rescue units, when practicable, be accompanied by persons qualified in the conduct of aircraft accident investigations.

14.3.8.5. NAMA shall designate a aeronautical search and rescue point of contact for the receipt of Cospas-Sarsat distress data.

14.3.8.6. NAMA shall :

(*a*) maintain and ensure continuous liaison with NEMA and other agencies relevant for Aeronautical search and rescue operations ;

(*b*) maintain a database and/or schedule of supporting organizations, agencies and companies, together with available equipment and personnel for deployment to aeronautical search and rescue operations ;

(*c*) ensure the closest practicable coordination and co-operation with the Maritime Coordination Centre ;

(*d*) designate the RCC responsible for each SRR to prepare and review a comprehensive plan of operations for the conduct of aeronautical search and rescue operations.

14.3.9. Dissemination of Information

14.3.9.1. NAMA shall publish and disseminate all information necessary for the entry of aeronautical search and rescue units of other States into its territory or, alternatively, include this information in aeronautical search and rescue service arrangements.

14.3.9.2. When such information could benefit the provision of aeronautical search and rescue services, NAMA shall make available, through the rescue coordination centres or other agencies, information regarding their aeronautical search and rescue plans of operation.

14.3.9.3. NAMA shall, to the extent desirable and practicable, disseminate information to the general public and emergency response authorities regarding actions to be taken when there is reason to believe that an aircraft's emergency situation may become cause for public concern or require a general emergency response.

14.3.10. Preparatory Information

14.3.10.1. Each rescue co-ordination centre shall have readily available at all times up-to-date information concerning the following in respect of its aeronautical search and rescue region :

(*a*) aeronautical search and rescue units, rescue subcentres and alerting posts ;

(*b*) air traffic services units ;

(*c*) means of communication that may be used in aeronautical search and rescue operations ;

(*d*) addresses and telephone numbers of all operators, or their designated representatives, engaged in operations in the region ; and

(*e*) any other public and private resources including medical and transportation facilities that are likely to be useful in aeronautical search and rescue.

14.3.10.2. Each rescue coordination centre of NAMA shall have readily available all other information of interest to aeronautical search and rescue, including information regarding :

(*a*) the locations, call signs, hours of watch, and frequencies of all radio stations likely to be employed in support of aeronautical search and rescue operations ;

(*b*) the locations and hours of watch of services keeping radio watch, and the frequencies guarded ;

(*c*) locations where supplies of droppable emergency and survival equipment are stored ; and

(*d*) objects which it is known might be mistaken for unlocated or unreported wreckage, particularly if viewed from the air.

14.3.10.3. Each rescue co-ordination centre of NAMA whose aeronautical search and rescue region includes maritime areas shall have ready access to information regarding the position, course and speed of ships within such areas that may be able to provide assistance to aircraft in distress and information on how to contact them.

14.3.10.4. NAMA shall, individually or in co-operation with other States, either establish ship reporting systems in co-operation with maritime authorities or arrange communication links with Amver or regional ship reporting systems to facilitate aeronautical search and rescue operations at sea.

14.3.11. PLANS OF OPERATION

14.3.11.1. Each rescue co-ordination centre shall prepare detailed plans of operation for the conduct of aeronautical search and rescue operations within its aeronautical search and rescue region.

14.3.11.2. Aeronautical search and rescue plans of operations shall be developed jointly with representatives of the operators and other public or private services that may assist in providing aeronautical search and rescue services or benefit from them, taking into account that the number of survivors could be large.

14.3.11.3. The plans of operation shall specify arrangements for the servicing and refuelling, to the extent possible, of aircraft, vessels and vehicles employed in aeronautical search and rescue operations, including those made available by other States.

14.3.11.4. The aeronautical search and rescue plans of operation shall contain details regarding actions to be taken by those persons engaged in aeronautical search and rescue, including :

(*a*) the manner in which aeronautical search and rescue operations are to be conducted in the aeronautical search and rescue region ;

(*b*) the use of available communication systems and facilities ;

(*c*) the actions to be taken jointly with other rescue coordination centres ;

(*d*) the methods of alerting en-route aircraft and ships at sea ;

(*e*) the duties and prerogatives of persons assigned to aeronautical search and rescue ;

(*f*) the possible redeployment of equipment that may be necessitated by meteorological or other conditions ;

14.3.11.5. Aeronautical search and rescue plans of operation shall be integrated with airport emergency plans to provide for rescue services in the vicinity of aerodromes including, for coastal aerodromes, areas of water.

14.3.12. Aeronautical search and rescue units.

14.3.12.1. Each aeronautical search and rescue unit shall :

(*a*) be cognizant of all parts of the plans of operation prescribed in 14.3.11 that are necessary for the effective conduct of its duties ; and

(*b*) keep the rescue coordination centre informed of its preparedness.

14.3.12.2. NAMA shall :

(*a*) maintain in readiness the required number of aeronautical search and rescue facilities ; and

(*b*) maintain adequate supplies of rations, medical stores, signalling devices and other survival and rescue equipment.

Training and exercises.

14.3.13. To achieve and maintain maximum efficiency in aeronautical search and rescue, NAMA shall provide for regular training of their aeronautical search and rescue personnel and arrange appropriate aeronautical search and rescue exercises.

Wreckage.

14.3.14. NAMA shall ensure that wreckage resulting from aircraft accidents within its territory or, in the case of accidents on the high seas or in areas of undetermined sovereignty, within the aeronautical search and rescue regions for which it is responsible, is removed, obliterated or charted following completion of the accident investigation, if its presence might constitute a hazard or confuse subsequent aeronautical search and rescue operations.

14.3.15. INFORMATION CONCERNING EMERGENCIES

14.3.15.1 Any person or element of the aeronautical search and rescue organization having reason to believe that an aircraft is in an emergency shall give immediately all available information to the rescue co-ordination centre concerned.

14.3.15.2. Rescue co-ordination centres shall, immediately upon receipt of information concerning aircraft in emergency, evaluate such information and assess the extent of the operation required.

14.3.15.3. When information concerning aircraft in emergency is received from other sources than air traffic services units, the rescue coordination centre shall determine to which emergency phase the situation corresponds and shall apply the procedures applicable to that phase.

14.3.16. Procedures for rescue coordination centres during emergency phases.

Uncertainty phase.

14.3.16.1. Upon the occurrence of an uncertainty phase, the rescue co-ordination centre shall cooperate to the utmost with air traffic services units and other appropriate agencies and services in order that incoming reports may be speedily evaluated.

Alert phase.

14.3.16.2. Upon the occurrence of an alert phase the rescue co-ordination centre shall immediately alert aeronautical search and rescue units and initiate any necessary action.

Distress phase.

14.3.16.3. Upon the occurrence of a distress phase, the rescue co-ordination centre shall :

(*a*) immediately initiate action by aeronautical search and rescue units in accordance with the appropriate plan of operation ;

(*b*) ascertain the position of the aircraft, estimate the degree of uncertainty of this position, and, on the basis of this information and the circumstances, determine the extent of the area to be searched ;

(*c*) notify the operator, where possible, and keep the operator informed of developments ;

(*d*) notify other rescue coordination centres, the help of which seems likely to be required, or which may be concerned in the operation ;

(*e*) notify the associated air traffic services unit, when the information on the emergency has been received from another source ;

(*f*)request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist to :

(1) maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or an ELT ;

(2) assist the aircraft in distress as far as practicable ; and

(3) inform the rescue co-ordination centre of any developments ;

(*g*) from the information available, draw up a detailed plan of action for the conduct of the search and/or rescue operation required and communicate such plan for the guidance of the authorities immediately directing the conduct of such an operation ;

(*h*) amend as necessary, in the light of evolving circumstances, the detailed plan of action ;

(*i*) notify the appropriate accident investigation authorities ; and

(*j*) notify the State of Registry of the aircraft.

14.3.16.4. The order in which these actions are described shall be followed unless circumstances dictate otherwise.

Initiation of aeronautical search and rescue action in respect of an aircraft whose position is unknown.

14.3.16.5. In the event that an emergency phase is declared in respect of an aircraft whose position is unknown and may be in one of two or more aeronautical search and rescue regions, the following shall apply :

(*a*) When a rescue coordination centre is notified of the existence of an emergency phase and is unaware of other centres taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with 14.3.16 and confer with neighbouring rescue coordination centres with the objective of designating one rescue coordination centre to assume responsibility forthwith ;

(*b*) Unless otherwise decided by common agreement of the rescue coordination centres concerned, the rescue coordination centre to coordinate search and rescue action shall be the centre responsible for :

(1) the region in which the aircraft last reported its position ; or

(2) the region to which the aircraft was proceeding when its last reported position was on the line separating two aeronautical search and rescue regions ; or

(3) the region to which the aircraft was destined when it was not equipped with suitable two-way radio communication or not under obligation to maintain radio communication ; or

(4) the region in which the distress site is located as identified by the Cospas-Sarsat system.

(*c*) After declaration of the distress phase, the rescue coordination centre with overall coordination responsibility shall inform all rescue coordination centres that may become involved in the operation of all the circum-stances of the emergency and subsequent developments.

Likewise, all rescue coordination centres becoming aware of any information pertaining to the emergency shall inform the rescue coordination centre that has overall responsibility.

14.3.16.5. Passing of information to aircraft in respect of which an emergency phase has been declared.

Whenever applicable, the rescue coordination centre responsible for aeronautical search and rescue action shall forward to the air traffic services unit serving the flight information region in which the aircraft is operating, information of the aeronautical search and rescue action initiated, in order that such information can be passed to the aircraft.

14.3.17. Where the conduct of operations over the entire aeronautical search and rescue region is the responsibility of more than one Contracting State, each involved State shall take action in accordance with the relevant plan of operations when so requested by the rescue coordination centre of the region.

Procedures where responsibility for operations extends to two or more Contracting States

14.3.18. The authorities immediately directing the conduct of operations or any part thereof shall :

Procedures for SAR authorities in the field

(*a*) give instructions to the units under their direction and inform the rescue coordination centre of such instructions ; and

(*b*) keep the rescue co-ordination centre informed of developments.

14.3.19. Procedures for rescue co-ordination centres-termination and suspension of operations.

14.3.19.1. Aeronautical search and rescue operations shall continue, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.

14.3.19.2. The responsible rescue co-ordination centre shall normally be responsible for determining when to discontinue aeronautical search and rescue operations.

14.3.19.3. When an aeronautical search and rescue operation has been successful or when a rescue co-ordination centre considers, or is informed, that an emergency no longer exists, the emergency phase shall be cancelled, the aeronautical search and rescue operation shall be terminated and any authority, facility or service that has been activated or notified shall be promptly informed.

14.3.19.4. If an aeronautical search and rescue operation becomes impracticable and the rescue coordination centre concludes that there might still be survivors, the centre shall temporarily suspend on-scene activities pending further developments and shall promptly inform any authority, facility or service which has been activated or notified. Relevant information subsequently received shall be evaluated and aeronautical search and rescue operations resumed when justified and practicable.

14.3.20. PROCEDURES AT THE SCENE OF AN ACCIDENT.

14.3.20.1. When multiple facilities are engaged in aeronautical search and rescue operations on-scene, the rescue coordination centre or rescue subcentre shall designate one or more units on-scene to coordinate all actions to help ensure the safety and effectiveness of air and surface operations, taking into account facility capabilities and operational requirements.

14.3.20.2. When a pilot-in-command observes that either another aircraft or a surface craft is in distress, the pilot shall, if possible and unless considered unreasonable or unnecessary :

(*a*) keep the craft in distress in sight until compelled to leave the scene or advised by the rescue co-ordination centre that it is no longer necessary ;

(*b*) determine the position of the craft in distress ;

(*c*) as appropriate, report to the rescue co-ordination centre or air traffic services unit as much of the following information as possible ;

(*d*) act as instructed by the rescue co-ordination centre or the air traffic services unit.

14.3.20.3. If the first aircraft to reach the scene of an accident is not a aeronautical search and rescue aircraft, it shall take charge of on-scene activities of all other aircraft subsequently arriving until the first aeronautical search and rescue aircraft reaches the scene of the accident. If, in the meantime, such aircraft is unable to establish communication with the appropriate rescue coordination centre or air traffic services unit, it shall, by mutual agreement, hand over to an aircraft capable of establishing and maintaining such communications until the arrival of the first aeronautical search and rescue aircraft.

14.3.20.4. When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication is not available, it shall, if practicable, drop communication equipment that would enable direct contact to be established, or convey the information by dropping a hard copy message.

14.3.20.5. When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in 14.3.20.4 or, if this is not practicable, by making the appropriate visual signal.

14.3.20.6. When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal. If no radio communication can be established, the aircraft shall make the appropriate visual signal.

14.3.21. Whenever a distress transmission is intercepted by a pilot-in-command of an aircraft, the pilot shall, if feasible : Procedures for a pilot-in-command intercepting a distress transmission

(*a*) acknowledge the distress transmission ;

(*b*) record the position of the craft in distress if given ;

(*c*) take a bearing on the transmission ;

(*d*) inform the appropriate rescue coordination centre or air traffic services unit of the distress transmission, giving all available information ; and

(*e*) at the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission.

14.3.22. Aeronautical search and rescue signals.

14.3.22.1. The air-to-surface and surface-to-air visual signals in the IS 14.3.22.1(-to be developed by DAAS) shall, when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.

14.3.22.2. Upon observing any of the signals in the IS 14.3.22.1(- to be developed by DAAS), aircraft shall take such action as may be required by the interpretation of the signal given in that IS 14.3.22.1(- to be developed by DAAS).

14.3.23. Maintenance of Records

14.3.23.1. Each rescue coordination centre shall keep a record of the operational efficiency of the aeronautical search and rescue organization in its region.

14.3.23.2. Each rescue coordination centre shall prepare appraisals of actual aeronautical search and rescue operations in its region. These appraisals shall comprise any pertinent remarks on the procedures used and on the emergency and survival equipment, and any suggestions for improvement of those procedures and equipment. Those appraisals which are likely to be of interest to other States shall be submitted to the Authority for information and dissemination as appropriate.

14.4. AERONAUTICAL INFORMATION SERVICES

Applicability.

14.4.1. This subpart is applicable to the provision of Aeronautical Information Service(AIS).

Provision of Aeronautical Information Services.

14.4.2. No Aeronautical Information Services Provider shall provide aeronautical information services at aerodromes in Nigeria except under the authority of, and in accordance with the provisions contained in its Aeronautical Information Service Provider certificate issued by the Authority. (IS 14.4.2).

14.4.3. Responsibilities of Holder of AIS Service provider Certificate.

14.4.3.1. An Aeronautical Information Services Provider issued with certificate under these Regulations shall :

(*a*) be responsible for the provision of aeronautical information services to ensure that the information necessary for the safety, regularity or efficiency of air navigation is available in the form suitable for the operational requirements of :

(*i*) flight operations personnel including flight crew and the personnel responsible for the provision of pre-flight information ; and

(*ii*) associated air traffic services unit ;

(*b*) collect, collate, edit and disseminate aeronautical information concerning the entire territory of Nigeria ; and

(*c*) publish the aeronautical information as an integrated Aeronautical Information Package.

(*d*) publish aeronautical geographical co-ordinates (indicating latitude and longitude) expressed in WGS-84 geodetic reference datum.

14.4.3.2. The conditions, requirements, rules, procedures and standards for the provision and publication of the aeronautical information in NOTAM, AIRAC and AIC as the case may be, shall be in conformity with the AIS Manual of Standards Chapters 5, 6 and 7 respectively.

14.4.3.3. An Aeronautical Information Publication shall contain, in three parts; (Part 1-General (GEN), Part 2-En-route (ENR), Part 3-Aerodromes (AD) sections and subsections uniformly referenced to allow for standardized electronic data storage and retrieval.

14.4.3.4. The Specifications for AIP Amendments and Supplements shall be in accordance with the provisions in the Aeronautical Information Services Manual of Standards chapter 4.

14.4.3.5. The approved Aeronautical Information Services Provider shall ensure that all entries to the AIP are approved by the Authority.

14.4.3.6. The approved Aeronautical Information Services Provider shall ensure that :

(*a*) Copies of all AIC, NOTAM, List of Valid NOTAM, AIP, AIP Supplement and AIP Amendments to be published shall be approved by the Authority before publication.

(*b*) all AIP amendments are made available to AIP subscribers.

14.4.4. TELECOMMUNICATION REQUIREMENTS.

14.4.4.1. The approved Aeronautical Information Services Provider shall ensure that International NOTAM offices (NOF) shall be connected to the Aeronautical Fixed Service (AFS) and shall be provided with printed communications.

14.4.4.2. The approved Aeronautical Information Services Provider shall ensure that each international NOTAM office shall be connected, through the Aeronautical Fixed Service (AFS), to the following points within the Nigerian Airspace :

14.4.4.2.1. Area control centres and flight information centres ;

14.4.4.2.2 Aerodromes/Heliports at which an information service is provided with preflight briefing and post-flight information.

14.4.4.3. The approved Aeronautical Information Services Provider may apply the use of internet for non-time critical types of aeronautical information.

14.4.5. Quality Management System.

14.4.5.1. The Aeronautical Information Services Provider shall establish a quality management system to provide among others for the procedures, processes, and resources necessary for implementing quality management of aeronautical information and data.

14.4.5.2. The quality management system shall be documented in the approved Aeronautical Information Services Provider's Manual of Operations.

14.4.5.3. If the holder of an Aeronautical Information Services Provider certificate makes any change in the quality management system referred to in this section, which is significant to the showing of compliance with the appropriate requirements, the holder shall notify the Authority.

14.4.5.4. The AIS provider certificate holder shall establish verification and validation procedures which ensure that upon receipt of aeronautical data and aeronautical information, quality requirements (accuracy, resolution, integrity and traceability) are met.

14.4.5.5. The AIS provider certificate holder shall introduce automation in AIS systems with the objective of improving the timeliness, quality, efficiency and cost effectiveness of aeronautical information services.

14.4.5.6. The approved Aeronautical Information Services Provider shall provide, in a timely manner, the personnel, facility and financial resources needed to :

(*a*) implement and improve the processes of the Quality\management System ; and

(*b*) address customer satisfaction on all AIS/MAP related services

14.4.6. AIS Service Provider's Manual of Operations.

14.4.6.1. The holder of an Aeronautical Information Services Provider certificate shall :

(*a*) provide the services listed in its Manual of Operations, in accordance with the procedures as prescribed in IS 14.4.6.1(*a*) ;

(*b*) The Aeronautical Information Services Provider Manual of Operations shall include the following information :

(*i*) personnel requirements and the responsibilities of personnel IS 14.4.6.1(*b*)(*i*) ;

(*ii*) training and checking of personnel engaged in Aeronautical Information Services activities in accordance with IS 14.4.6.1(*b*)(*ii*) ;

(*iii*) contingency plans developed for part or total system failure for which the organisation provides a service IS 14.4.6.1(*b*)(*iii*) ;

(*iv*) a security plan that details what measures both, physical and procedural, they have in place to protect their facilities and services.

(*v*) facilities and equipment and how those facilities are maintained. IS 14.4.6.1(*b*) (*v*) ;

(*vi*) fault and defect reporting. IS 14.4.6.1(*b*)(*vi*) ;

(*vii*) maintenance of documents and records. IS14.4.6.1 (*b*)(*vii*) ; and

(*viii*) any other information requested by the Authority.

(*c*) hold at least one complete and current copy of its Manual of Operations at each Aerodrome Unit specified in its Manual of Operations ;

(*d*) comply with all procedures detailed in its Manual of Operations ;

(*e*) Comply with the Manual of Standards ;

(*f*) continue to comply with the appropriate requirements prescribed in these Regulations ;

(*g*) replace or upgrade any obsolete installation ;

(*h*) keep the Authority informed of its plans for the development and modernisation of its facilities.

14.4.7. Display of Aeronautical Information Services Certificate.

14.4.7.1. The holder of an Aeronautical Information Services Provider certificate shall display the approved certificate in a prominent place visible to the public at such holder's principal place of business and, if a copy of the duplicate certificate is displayed, it shall produce the original to the Authority's officials, if so requested.

14.4.8. Safety Audit and Inspections.

14.4.8.1. An applicant for an Aeronautical Information Services Provider certificate shall permit the Authority's Inspector to carry out such safety inspections and audits as may be necessary to verify the validity of any application made in accordance with these Regulations.

14.4.8.2. The holder of an Aeronautical Information Services Provider certificate shall permit the Authority's Inspector to carry out such safety inspections and audits as may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

14.4.9. Application of Human Factors principles.

14.4.9.1. The AIS service provider shall take into consideration Human Factors principles in the organisation of the aeronautical information services as well as the design, contents, processing and distribution of aeronautical data and information.

14.4.9.2 Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

Search and Rescue Responsibilities and Co-ordinations

14.4.10. The Aeronautical Information Services Provider shall provide such assistance as requested from the authority responsible for conducting SAR activities.

Local Operating Procedures.

14.4.11. The Aeronautical Information Services Provider shall develop local operating procedures for the collection and dissemination of relevant data in AIS Aerodrome units in accordance with IS14.4.11.

14.4.12. Application for Approval, Amendment or Renewal.

14.4.12.1. An applicant is eligible to become an AIS provider if he is able to comply with the requirements of these Regulations.

14.4.12.2. An application for the issuance of an Aeronautical Information Services Provider certificate or an amendment thereof shall be made in the manner prescribed by the Authority and shall include :

(*a*) a copy of the applicant's Manual of Operations ;

(*b*) a written statement setting out aeronautical information services that the applicant proposes to provide ;

(*c*) enough information to identify, for each aeronautical information service the type and the location from which the service is proposed to be provided.

(*d*) a written statement setting out the hours during which each aeronautical information service is proposed to be available ;

(*e*) a written statement describing the arrangements the applicant has made to comply with the requirements of these Regulations ;

(*f*) the appropriate fee prescribed by the Authority.

14.4.12.3. In the case of certificate renewal, the holder of the certificate shall ensure that the process for renewal is commenced at least 60 days prior to the date on which such certificate expires.

14.4.12.4. If an Aeronautical Information Service Provider certificate is subject to conditions, the provider shall comply with the conditions so specified.

14.4.13. Issuance of Aeronautical Information Services Provider Certificate.

14.4.13.1. The Authority shall issue an Aeronautical Information Service Provider a Certificate to provide aeronautical information service, if the applicant complies with the requirements prescribed in these Regulations.

14.4.13.2. A Certificate issued under this Part shall include the following information :

(*a*) the provider's name and address of its principal place of business ;

(*b*) a list of the aeronautical information services covered by the aeronautical information service provider certificate ; and

(*c*) for each aeronautical information service the location from which the service will be provided ;

14.4.14. Scope and Variation of AIS provider Certificates.

14.4.14.1. The holder of AIS provider certificate shall be entitled to provide any service or combination of services listed in its manual of operations ;

14.4.14.2. If an Aeronautical Information Service Provider wants to vary its Certificate, it shall apply to the Authority under this Regulation for that purpose :

(*a*) the application shall contain, or have with it, a copy of the proposed variation ;

(*b*) if the Authority approves the variation, the variation shall take effect from the day proposed by the applicant ;

(*c*) Where no date is proposed by the applicant, the effective date of the variation shall be the date the certificate is conveyed to the service provider.

14.4.15. Period of Validity of Certificate.

14.4.15.1. An AIS provider Certificate shall be valid for a period determined by the Authority, which shall not exceed five years from the date of issuance or renewal thereof.

14.4.15.2. The Certificate shall remain in force until it expires, is suspended, or cancelled by the Authority.

14.4.15.3. The holder of AIS Certificate, which is cancelled, shall, within 7 days from the date on which the certificate is cancelled, shall surrender such Certificate to the Authority.

14.4.16. Transferability of Certificate.

14.4.16.1. An AIS provider Certificate shall not be transferable.

14.4.16.2. A change in ownership of the holder of AIS provider Certificate shall be deemed to be a change of significance that shall be notified to the Authority.

Suspension of Certificate.

14.4.17. An Aeronautical Information Service Provider Certificate may be suspended in the event of violation of any provision of these Regulations.

14.4.18. Suspension, Cancellation or Variation of an Aeronautical Information Service Provider Certificate by the Authority.

14.4.18.1. The Authority may, arising from the recommendation of its Inspector, by written notice given to an Aeronautical Information Service Provider, suspend, cancel or vary the Aeronautical Information Services Provider Certificate if there are reasonable grounds for believing that the certificate holder :

(*a*) has breached a condition of the certificate ; or

(*b*) has contravened a provision of this Part ; or

(*c*) does not meet, or continue to meet, a requirement of this Part for getting or holding the certificate ; or

(*d*) has otherwise been guilty of conduct that renders the Aeronautical Information Services Provider continued holding of the certificate likely to have an adverse effect on the safety of Air Navigation.

14.4.18.2. Before suspending, cancelling or varying an Aeronautical Information Service Provider Certificate, the Authority shall :

(*a*) give written notice to the certificate holder of the facts or circumstances that, in the opinion of the Authority, amount to grounds for the suspension, cancellation or variation of the certificate ;

(*b*) invite the certificate holder to show cause in writing, within 7 days after the date of the notice, why the certificate should not be suspended, cancelled or varied ; and

(*c*) take into account any written representations made, within the time allowed under paragraph (*b*), by or on behalf of the Aeronautical Information Service Provider explaining why the certificate should not be cancelled.

14.4.19. Right of Appeal of Holder of AIS provider Certificate.

14.4.19.1. The holder of a certificate who feels aggrieved by the suspension of the certificate may appeal against such suspension to the Authority, within 7 days after such holder becomes aware of such suspension.

14.4.19.2. Procedure for the appeal shall be as prescribed in Part 1.10

14.4.20. Register of Certificates.

14.4.20.1. The Authority shall maintain a register of all Aeronautical Information Service Provider Certificates issued under this Part.

14.4.20.2. The register shall contain information recorded on the Aeronautical Information Service Provider Certificate and any other information required by the Authority.

14.4.20.3. Persons who intend to access the register of aircraft for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

Substitution of Aeronautical Information Services Provider.

14.4.21. The Authority may, when it considers it necessary in the interest of aviation safety, appoint the holder of an Aeronautical Information Service Certificate as a substitute Aeronautical Information Services Provider to provide an aeronautical information service in respect of an AIS provider's Certificate which has been suspended by the Authority under this Part, for the duration of such suspension.

14.4.22. Pre-Flight and Post- Flight Information.

14.4.22.1. The service provider shall ensure that at all aerodromes, an AIS briefing office is made available to pilots to facilitate pre-flight information required for a flight. Information shall be presented in such a manner to facilitate self-briefing in order to save the crews' time.

14.4.22.2. Factors to be considered in reference to 14.4.22.1 shall include :

(*a*) the physical layout of the briefing room ;

(*b*) the format of the Pre-flight Information Bulletin (PIB) ;

(*c*) an adequate wall display ;

(*d*) easy access to basic information ;

(*e*) requirements stated in Part 8.6 of these Regulations and AIS Manual of Standards, Chapter 8 (8.1 and 8.2).

14.4.23. Electronic Terrain and Obstacle Data (E- TOD).

14.4.23.1. The certificate holder shall ensure ensure that sets of electronic terrain and obstacle data used in combination with aeronautical data, as appropriate, shall satisfy user requirements necessary to support the air navigation applications as contained in AIS Manual of Standards Chapter 10.

Aerodrome Mapping Data (AMD).

14.4.24. The certificate holder shall ensure that :

(*a*) ISO 19100 series of standards for geographic information are used as a reference framework ;

(*b*) Aerodrome mapping are described following the ISO 19131 data product specification standards.

(*c*) The content and structure of aerodrome mapping data sets shall be defined in terms of an application schema and a feature catalogue ;

(*d*) Aerodrome mapping data sets shall contain aerodrome mapping data consisting of aerodrome features ;

(*e*) Aerodrome mapping metadata shall comply with ISO 19115.

14.5. Aeronautical Charts

Applicability.

14.5.1. This sub-part is applicable to the provision of Aeronautical Charts.

14.5.2. Provision of Aeronautical Charts.

14.5.2.1. No person shall provide Aeronautical Charts in Nigeria except with the Approval of the Authority and in accordance with IS 14.5.2.1

14.5.2.2. The Aeronautical Charts Provider shall ensure that all Aeronautical charts, updates and entries used in Nigeria are approved by the Authority.

14.5.3. Application for Approval, Amendment or Renewal.

14.5.3.1. An applicant is eligible to become an Aeronautical Charts provider if he is able to comply with the requirements of these Regulations.

14.5.3.2. An application for the issuance of an Aeronautical Charts Provider certificate or an amendment thereof shall be made in the manner prescribed by the Authority and shall include :

(*a*) a copy of the applicant's Manual of Operations as described in IS 14.5.3.2 ;

(*b*) a written statement setting out the aeronautical charts that the applicant proposes to provide ;

(*c*) enough information to identify, for each aeronautical chart the type and the location from which it is proposed to be provided ;

(*d*) a written statement describing the arrangements the applicant has made to comply with the requirements of this Regulation ;

(*e*) the appropriate fee prescribed by the Authority.

14.5.3.3. In the case of renewal of Certificate, the holder of Certificate shall ensure that the process for renewal is commenced at least 60 days prior to the expiration of the Certificate.

14.5.3.4. The Personnel requirements and the responsibilities of personnel shall be as provided in IS 14.5.3.4.

14.5.3.5. Training of staff shall be in the manner that staff engaged in Aeronautical Charts activities are adequately trained in accordance with IS 14.5.3.5.

14.5.4. Quality System.

14.5.4.1. The Certificate holder shall establish, implement, maintain, and adhere to a quality system that is appropriate to the size, nature, and complexity of all activities authorized to be conducted under the certificate.

14.5.4.2. The quality system shall be documented in the service providers' Manual of Operations.

14.5.4.3. If the holder of an Aeronautical Charts Provider certificate makes any significant change in the quality system referred to in this section, the holder shall notify the Authority.

14.5.5. Contingency plan.

14.5.5.1. The Applicant for the grant of Aeronautical Charts Provider certificate shall establish a contingency plan providing for the safe, orderly and continuous flow of information in the event of disruption and/or interruption.

14.5.5.2. An Aeronautical Charts Provider shall develop and maintain Contingency Plans for implementation in the event of disruption, or potential disruption, of Aeronautical Charts and related supporting services for which it is responsible. The disruption may be caused intentionally (sabotage) or unintentionally (equipment failure).

14.5.5.3. In developing such contingency plans, the Aeronautical Charts Provider shall work closely with the Aeronautical Charts authorities responsible for the provision of services in adjacent or contiguous airspaces and other airspace users concerned.

14.5.5.4 The contingency plan shall include :

(*a*) the actions to be taken by the Aeronautical Chart provider ;

(*b*) possible alternative arrangements for providing the service ;

(*c*) the arrangements for resuming normal operations for the service ; and

(*d*) these plans shall be submitted as part of the Manual of Operations.

Security Programme.

14.5.6. The applicant shall provide a plan that details what measures, both physical and procedural ; they have in place the protection of their facilities and services. This should include a security assessment of the facilities used by the applicant.

14.5.7. Issuance of Aeronautical Charts Provider Approval Certificate.

14.5.7.1. The Authority shall issue an Aeronautical Charts Provider Certificate to produce Aeronautical Charts, upon compliance with the requirements prescribed in these Regulations.

14.5.7.2. The Aeronautical Chart Provider Certificate authorises the provision of :

(*a*) Aeronautical Charts from a single Aeronautical Chart Unit ; or (*b*) a combination of Aeronautical Charts from a network of approved Aeronautical Charts Providers.

14.5.7.3. Aeronautical Chart Service Provider Certificate issued under this Part shall include the following information :

(*a*) the provider's name and address of its principal place of business ;

(*b*) a list of the Aeronautical Charts covered by the provider's Certificate ; and

(*c*) for each Aeronautical Chart the location for which the service is provided ;

14.5.8. Scope and Variation of Certificates.

14.5.8.1. The holder of Aeronautical Chart Provider Certificate shall be entitled to provide any service or combination of services listed in its Manual of Operations ;

14.5.8.2. An application for variation of certificate shall be made to the Authority and shall contain a copy of the proposed variation ;

14.5.8.3. The variation, if approved by the Authority, shall take effect from the date proposed by the applicant ;

14.5.8.4. Where no date is proposed by the applicant, the effective date of the variation shall be the date the certificate is conveyed by the Authority.

14.5.9. Period of Validity of Aeronautical Chart Provider Certificate.

14.5.9.1. An Aeronautical Chart Provider Certificate shall be valid for a period determined by the Authority, which shall not exceed five years from the date of issuance or renewal thereof.

14.5.9.2.The Certificate shall remain in force until it expires, is suspended, or cancelled by the Authority.

14.5.9.3. The holder of AIS Certificate, which is cancelled, shall, within 7 days from the date on which the certificate is cancelled, shall surrender such Certificate to the Authority.

14.5.10. Transferability of Aeronautical Chart Provider Certificate.

14.5.10.1. An Aeronautical Chart Provider Certificate shall not be transferable.

14.5.10.2. A change in ownership of the holder of Aeronautical Chart Provider Certificate shall be deemed to be a change of significance that shall be notified to the Authority.

14.5.11. Responsibilities of an Aeronautical Charts Provider.

14.5.11.1. An Aeronautical Charts Provider issued with a Certificate under these Regulations shall :

(*a*) be responsible for the provision of Aeronautical Charts to ensure that the information necessary for the safety, regularity and efficiency of air navigation is available in the form suitable for the operational requirements of :

(*i*) flight operations personnel including flight crew and the personnel responsible for the provision of pre-flight information ; and

(*ii*) its associated Air Traffic Service Unit ;

(*b*) collect, collate, edit and disseminate aeronautical charts information concerning the entire territory of Nigeria ;

(*c*) take all reasonable steps to ensure that the information it provides and the aeronautical charts made available are adequate, accurate and that they are maintained up to date by an adequate revision service ;

(*d*) produce the chart or sheet itself for any chart or single sheet of chart series entirely contained within the territory of Nigeria.

14.5.11.2. The Aeronautical Chart Provider shall :

(*a*) provide the services listed in its Manual of Operations ;

(*b*) hold at least one complete and current copy of its Manual of Operations at each aeronautical Chart unit specified in its Manual of Operations ;

(*c*) Comply with the provisions of the Aeronautical Charts Manual of Standards ;

(*d*) comply with all procedures detailed in its Manual of Operations ;

(*e*) make each applicable part of the Manual of Operations available to the personnel who require those parts to carry out their duties;

(*f*) continue to comply with the appropriate requirements prescribed in this Regulation ;

(*g*) keep the records of all regular internal inspections for a period of five years from the date of each inspection ;

(*h*) replace or upgrade any obsolete installation ;

(*i*) keep the Authority informed of its plans for the development and modernisation of its facilities.

(*j*) ensure that the Data and the corresponding Metadata of any aeronautical data to be used for chart production be forwarded to the Authority for assessment.

Display of Certificate.

14.5.12. The holder of an Aeronautical Charts Provider Certificate shall display the Certificate in a prominent place, generally accessible to the public at such holder's principal place of business. If a photocopy of the original Aeronautical Charts Provider Certificate is displayed, it shall produce the original to the Authority's officials, if so requested.

14.5.13. Safety Audit and Inspections.

14.5.13.1. Aeronautical Charts Provider Certificate holder shall permit the Authority's Inspector to carry out such safety inspections and audits as may be necessary to verify the validity of any application made in accordance with these Regulations.

14.5.13.2. The holder of an aeronautical Charts Provider Certificate shall permit the Authority's Inspector to carry out such safety inspections and audits as may be necessary to determine compliance with the appropriate requirements of these Regulations.

14.5.14. Application of Human Factors Principles.

14.5.14.1. The Aeronautical Charts provider shall take into consideration Human Factors principles in the organisation of the aeronautical charts services.

14.4.14.2. Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

Facilities, Equipment and Maintenance of Aeronautical charts.

14.5.15. An Aeronautical Charts Provider shall provide Facilities, Equipment and Maintenance of charts in conformity with the provisions of International Standard Organization (ISO 9000) and as detailed in IS 14.5.15.

Search and Rescue Responsibilities and Co-ordination.

14.5.16. The Aeronautical Charts Provider shall provide all necessary charts that could be used by the agencies responsible for conducting SAR operations or activities.

Local Procedures.

14.5.17. The Aeronautical Charts Provider shall develop local operating procedures for the collection and dissemination of relevant data.

14.5.18. CO-ORDINATION

14.5.18.1. The Aeronautical Charts provider shall establish systems and procedures to ensure, where applicable, co-ordination with the agencies and other service providers listed below :

(1) Air Traffic Service Provider ;

(2) The Aeronautical Meteorological Service Provider ;

(3) The Nigerian Military ;

(4) Aircraft Operators ;

(5) Search and Rescue units ;

(6) Office of the Surveyor-General of the Federation ;

(7) Aerodrome AIS Units : and

(8) Other Government Agencies that may have safety related functions with aviation.

14.5.18.2. The applicant shall provide systems and procedures to facilitate communications between the units having an operational requirements with each other.

14.5.19. Provision of required information/data for aeronautical charts.

14.5.19.1. An Aeronautical Charts Provider shall establish procedures to collect and collate the information required for the activities listed in its Manual of Operations.

14.5.19.2. The procedures shall ensure that :

(*a*) Applicable information is obtained from organisations that provide services in support of the Nigerian air navigation system ;

(*b*) Arrangements for the timely provision of information are made with the information originators prescribed in 14.5.19.1.

14.5.19.3. Information received from the information originators prescribed in 14.5.19.2(*a*) is certified as accurate by a person identified by the originator to be responsible for the accuracy of that information.

14.5.20. Aeronautical Charts Provider Certificate may be suspended in the event of violation of any provision of these Regulations. Suspension of Certificate.

14.5.21. Suspension, Cancellation, or Variation of an Aeronautical Charts Provider Certificate by the Authority.

14.5.21.1. The Authority may, by written notice given to an Aeronautical Charts Provider, suspend, cancel or vary the Certificate if there are reasonable grounds for believing that the certificate holder :

(*a*) has breached a condition of the certificate ; or

(*b*) has contravened a provision of this Part ; or

(*c*) does not meet, or continue to meet, a requirement of this Part for getting or holding the certificate ; or

(*d*) has otherwise been guilty of conduct that renders the Aeronautical Charts provider continued holding of the certificate likely to have an adverse effect on the safety of Air Navigation.

14.5.21.2. Before suspending, cancelling or varying an Aeronautical Charts Provider Certificate, the Authority shall :

(*a*) give written notice to the certificate holder of the facts or circumstances that, in the opinion of the Authority, amount to grounds for the suspension, cancellation or variation of the certificate ;

(*b*) invite the certificate holder to show cause in writing, within 7 days after the date of the notice, why the certificate should not be suspended, cancelled or varied ; and

(*c*) take into account any written representations made, within the time allowed under paragraph (*b*), by or on behalf of the Aeronautical Charts Provider explaining why the certificate should not be cancelled.

14.5.22. Right of Appeal of Holder of Aeronautical Charts Provider Certificate.

14.5.22.1. The holder of a certificate who feels aggrieved by the suspension of the certificate may appeal against such suspension to the Authority, within 7 days after such holder becomes aware of such suspension.

14.5.22.2. Procedure for the appeal shall be as prescribed in Part 1.10

14.5.23. Register of Certificates.

14.5.23.1 The Authority shall maintain a register of all Aeronautical Charts Provider Certificates issued under this Part.

14.5.23.2. The register shall contain information recorded on the Aeronautical Charts Provider Certificate and any other information required by the Authority.

14.5.23.3. Persons who intend to access the register of aircraft for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

14.5.24. The Authority may, when it considers it necessary in the interest of aviation safety, appoint the holder of an Aeronautical Charts Provider Certificate as a substitute Aeronautical Charts Provider to provide Aeronautical Charts in respect of Certificate which has been suspended by the Authority under this Part, for the duration of such suspension. Substitution of another Aeronautical Charts Provider.

14.5.25. Operational Requirements and General Specifications.

14.5.25.1. The Aeronautical Charts Provider Certificate holder shall ensure that charts are produced to meet the operational requirements for charts as described in IS 14.5.25.1.

14.5.25.2. The Aeronautical Charts Provider Certificate holder shall ensure that Charts produced by Nigeria shall be made available to other ICAO contracting States on request or reciprocal basis.

14.5.25.3. The Aeronautical Charts Provider Certificate holder shall collaborate with the office of Surveyor General of the Federation and, or other agencies approved by office of Surveyor General for base maps and other data that may be used for the production of aeronautical charts for civil aviation.

14.5.25.4. The Aeronautical Charts Provider Certificate holder shall ensure that units of measurement to be used for charts production conform to the standards specified in 1.9 of these Regulations.

14.5.25.5. The Aeronautical Charts Provider Certificate holder shall ensure that general specifications and other requirements for all aeronautical charts produced shall be in compliance with IS14.5.25.5 and the provisions of the Aeronautical Charts Manual of Standards (MOS).

14.6. Aeronautical Meteorological Services

14.6.1. General.

14.6.1.1. This subpart is applicable to the provision of aeronautical meteorological services. Applicability.

14.6.2. Grant of Certificate to Aeronautical Meteorological Services Provider (AMSP)

14.6.2.1. The Authority shall grant an Aeronautical Meteorological Service Provider certificate for the provision of the following services in support of air navigation :

(*a*) routine meteorological observations at fixed intervals ;

(*b*) special weather observations whenever specified changes occur in respect of surface wind, visibility, runway visual range, present weather, cloud and air temperature ;

(*c*) weather forecasts and other relevant information for Aerodromes, Flight Information Regions, routes and flights with which it is concerned ;

(*d*) Flight crew briefing, consultation and flight documentation to flight crew members and other flight operations personnel ;

(*e*) continuous survey of meteorological conditions over the Aerodromes, Flight Information Regions, routes and flights with which it is designated to prepare forecasts ;

(*f*) weather watch and monitoring, including the ability to detect and forecast hazards relevant to the aviation community, in accordance with IS 14.6.2.1(*f*) ;

(*g*) forecast and warning products to the standards required by the user community ;

(*h*) record of aeronautical climatological information in the form of aerodrome climatological tables and summaries required for the planning of flight operations, investigation or operational analysis for supply, on request, to aeronautical users ;

(*i*) Exchange of meteorological information with other meteorological offices ;

(j) Tailor meteorological products and services to civil aviation operations, in accordance with these Regulations ;

(*k*) Supply information received concerning the accidental release of radioactive materials into the atmosphere within the Nigerian airspace to the ATS providers, AIS Provider and other meteorological watch offices for dissemination ;

(*l*) Issue SIGMET information phenomena which may affect the safety of aircraft operations, and the development of those phenomena in time and space within Nigerian airspace to the ATS providers, AIS Provider and other meteorological watch offices for dissemination in accordance with the template shown in appendix 6 and template shown in Table A6-1 of AeroMet Manual of Standards ;

(*m*) Issue SIGMET messages concerning volcanic ash cloud and tropical cyclones which shall be based on advisory information provided by Volcanic Ash Advisory Centers and Tropical Cyclone Advisory Centers, respectively, designated by regional air navigation agreement ;

(*n*) Implement policies on the requirements for and operational use of meteorological information on wind sensors as detailed in the IS 14.6.2.1(*n*) ;

(*o*) supply runway visual range on all runways intended for Category II and III instrument approach and landing operations ;

(*p*) Supply AIRMET information when taking into account the density of air traffic operating below flight level 100 ;

(*q*) Supply up-to-date meteorological information to relevant Aeronautical Information Services (AIS) units, as necessary for the conduct of their functions ;

(*r*) Ensure that when forecasts are identified as being originated by the WAFCs, no modifications shall be made to their meteorological content.

(*s*) keep the records of all regular internal inspections for a period of at least one year from the date of each inspection

14.6.2.2. The Authority shall designate a holder of the aeronautical meteorological services provider certificate to provide or to arrange for the provision of meteorological services for international air navigation.

14.6.2.3. The aeronautical meteorological services shall be provided by the certificate holder to meet the needs of international air navigation; in accordance with the provisions of these regulations and with due regard to regional air navigation agreements regarding meteorological services for international air navigation over waters and other areas which lie outside Nigeria territory.

14.6.2.4. The requirements of the certificate shall be as prescribed in these Regulations

14.6.2.5. The details of the Aeronautical Meteorological Services Provider shall be published in the AIP, AIP SUP, NOTAM and AIRAC as appropriate.

14.6.3. Co-Ordination Between Aeronautical Meteorological Watch Office and Associated Area Control Center.

14.6.3.1. The holder of an Aeronautical Meteorological Services Provider certificate shall maintain close co-ordination between the Meteorological Watch Office and the associated Area Control Center/Flight Information Center to ensure that meteorological information for SIGMET and others are consistent and in compliance with IS14.6.3.1.

14.6.3. 2. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that the specific value of any of the elements given in a meteorological report is understood by the recipient to be the best approximation to the actual conditions at the time of observation.

14.6.3.3. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that the specific value of any of the elements given in a forecast is understood by the recipient to be the most probable value which the element is likely to assume during the period of the forecast

14.6.3.4 The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that when the time of occurrence or change of an element is given in a forecast , this time shall be understood to be the most probable time.

Protection of Aeronautical Meteorological Equipment And Facilities.

14.6.4. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure the protection of its equipment, facilities and services by providing adequate security measures, both physical and procedural.

Requirement For Provision of Aeronautical Meteorological Services.

14.6.5. No aeronautical meteorological information service shall be provided at aerodromes or portion of airspace in Nigeria, except as specified under these Regulations,

Provision of Aeronautical Meteorological Service.

14.6.6. A holder of an aeronautical meteorological service provider certificate shall be responsible for :

(*a*) The provision of aeronautical meteorological services to ensure that the meteorological information and data necessary for the safe, regular and efficient operation of air navigation are accurate, timely and coded correctly, ; in the form suitable for the operational requirements of :

(*i*) flight operations personnel including flight crews and other personnel responsible for the provision of pre-flight briefing ; and

(*ii*) providers of air traffic services, search and rescue unit, airport management.

(*b*) Establishment and implementation of a quality management system based on ISO 9000 certification and in accordance with IS14.6.6 (*b*).

(*c*) Keeping all copies of documentation supplied for flight operations, either as printed copies or in electronic files for a period of at least 90 days from the date of issue.

(*d*) Provision of suitable telecommunications facilities to permit aerodrome meteorological offices and, as necessary, aeronautical meteorological stations to supply the required meteorological information to air traffic services units on the aerodromes for which those offices and stations are responsible, and in particular to aerodrome control towers, approach control units and the aeronautical telecommunications stations serving the aerodrome.

(*e*) Provision of suitable telecommunications facilities to permit meteorological watch offices to supply the required meteorological information to air traffic services and aeronautical search and rescue services units in respect of the flight information regions, control areas and aeronautical search and rescue regions for which those offices are responsible, and in particular to flight information centres, area control centres and rescue coordination centres and the associated aeronautical telecommunications stations.

(*f*) Provision of suitable telecommunications facilities to permit the receipt of the required world area forecast system products.

(*g*) Provision of suitable telecommunications facilities to permit meteorological offices to exchange operational meteorological information with other meteorological offices.

14.6.7. Aeronautical Meteorological Service Provider's Manual of Operations.

14.6.7.1. The holder of an Aeronautical Meteorological Services Provider certificate shall :

(*a*) provide the services listed in its Manual of Operations, in accordance with IS 14.6.7.1(*a*) ;

(*b*) The service providers Manual of Operations shall include the following information :

(*i*) policy and procedures for determining the capacity of the aeronautical meteorological services to be provided, the number of personnel required and their responsibilities to ensure the provision of adequate services ;

(*ii*) training and checking of staff and how that information is tracked ;

(*iii*) quality management system ;

(*iv*) safety management system ;

(*v*) contingency plans developed for part or total system failure for which the organisation provides a service ;

(*vi*) security measures ;

(*vii*) facilities and equipment and how those facilities are maintained ;

(*viii*) fault and defect reporting ;

(*ix*) maintenance of documents and records ;

(*x*) procedures for reporting of facilities and equipment inadequacies to the Authority ;

(*xi*) procedures for decommissioning of equipment or facilities ;

(*xii*) procedures for carrying out factory acceptance and site acceptance tests for new equipment or facility ;

(*xiii*) procedures for regular safety reviews of its operations and systems by its appropriately designated personnel ;

(*xiv*) procedures for release of meteorological information to aeronautical search and rescue unit ; and

(*xv*) any other information requested by the Authority.

(*c*) prepare the Local Standards Operation Procedures (LSOP) applicable to the services that are provided at each location of the aeronautical meteorological service provider.

(*d*) make available at least one complete and current copy of its Manual of Operations and Local Standards Operation Procedures (LSOP) at each aeronautical meteorological service station specified in its Manual of Operations ;

(*e*) comply with all procedures detailed in its Manual of Operations ;

(*f*) comply with the Manual of Standards for the provision of Aeronautical Meteorological Services and relevant safety directives issued by the Authority ;

(*g*) make each applicable part of the Manual of Operations available to the personnel who require those parts to carry out their duties ;

(*h*) continue to comply with the provisions in these Regulations.

14.6.7.2.—(*a*) The Aeronautical Meteorological Services Provider may deviate from the standards in time of an emergency, or other circumstances, that may make the deviation necessary in the interest of safety.

(*b*) The provider shall report, the deviation to the Authority immediately, stating how long the deviation is expected to last.

Equipment Requirements.

14.6.8. The holder of an Aeronautical Meteorological Services Provider Certificate shall comply with the requirements of this part and ;

(*a*) replace or upgrade any obsolete installation ;

(*b*) provide and implement appropriate equipment calibration and maintenance programme in accordance with the manufacturers' specifications;

(*c*) install only meteorological instruments that are approved by the World Meteorological Organisation's as suitable for aeronautical meteorological services;

(*d*) provide at aerodromes with runways intended for Cat II and Cat III instrument approach and landing operations; automated equipment for measuring or assessing, as appropriate, and for monitoring and remote indicating of surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure to support approach and landing and take-off operations. These devices shall be integrated automatic systems for acquisition, processing, dissemination and display in real time of the meteorological parameters affecting landing and takeoff operations.

(*f*) ensure that where an integrated semi-automatic system is used for the dissemination/display of meteorological information, it shall be capable of accepting the manual insertion of data covering those meteorological elements which cannot be observed by automatic means.

(*g*) ensure that the units providing air traffic service and aeronautical information service for an aerodrome is kept informed without delay of changes in the serviceability status of the automated equipment

14.6.9. PERSONNEL REQUIREMENTS.

Personnel Requirements.

14.6.9.1. The holder of an Aeronautical Meteorological Services Provider certificate shall have, at all times, suitably qualified and trained personnel in sufficient number in accordance with IS 14.6.9.1.

14.6.9.1.2. The holder of an Aeronautical Meteorological Services Provider Certificate shall set up and maintain, in accordance with its Manual of Operations :

(*a*) continuing assessment of its personnel competency for the purposes of ensuring that they continue to satisfy the competency requirements in relation to observation, forecsating and instrumentation ; and

(*b*) process the retraining of any of its personnel who at any time do not satisfy the competency requirement.

14.6.9.1.3. The holder of an aeronautical Meteorological Services Provider Certificate shall include details of the programme including necessary training and tests of competency in its manual of operations.

Qualification, and Training And Competency of Personnel.

14.6.9.2. The holder of an Aeronautical Meteorological Services Provider certificate shall comply with the requirements for qualifications, education and training of its personnel in accordance with IS 14.6.9.2 ;

Collaboration Between Aeronautical Meteorological Service Provider and Agency Providing Air Traffic Services.

14.6.10. The holder of an Aeronautical Meteorological Services Provider certificate shall collaborate with the ATS provider and aircraft operating on international air routes for the reporting of routine aircraft observations during en-route and climb-out phases of the flight; and special and other non-routine aircraft observations during any phase of the flight as prescribed in IS14.6.10.

Display of Aeronautical Meteorological Services Provider Approval Certificate.

14.6.11. The holder of an Aeronautical Meteorological Services Provider certificate shall display the certificate in a prominent place, generally accessible to the public at such holder's principal place of business and, if a copy of the original certificate is displayed, it shall produce the original to the Authority's officials, if so requested.

14.6.12. Safety Audit and Inspections

14.6.12.1. An applicant for the issuance of an Aeronautical Meteorological Services Provider certificate shall permit the Authority to carry out such safety audit and inspection as may be necessary to verify the validity of any application made in accordance with these Regulations.

14.6.12.2. The holder of an Aeronautical Meteorological Services Provider certificate shall permit the Authority to carry out such safety audit and inspection as may be necessary to determine compliance with the appropriate requirements prescribed in this Part and for post-implementation monitoring to verify that the defined level of safety continues to be met.

Safety Management System

14.6.13. The holder of an Aeronautical Meteorological Services Provider certificate shall implement a safety management system acceptable to the Authority as prescribed in Part 20 of these Regulations.

14.6.14. Contingency Plan

14.6.14.1. The holder of an Aeronautical Meteorological Services provider certificate shall develop and maintain Contingency Plans for implementation in the event of disruption, or potential disruption, of aeronautical meteorological services. The disruption may be caused intentionally (sabotage) or unintentionally (equipment failure or industrial action).

14.6.14.2. The plan shall include :

(*a*) the actions to be taken by the provider's personnel responsible for providing the service ; and

(*b*) possible alternative arrangements for providing the service ; and

(*c*) the arrangements for resuming normal operations for the service.

14.6.14.3. These plans shall be submitted as part of the Manual of Operation.

14.6.15. Installation, Maintenance and Calibration of Equipment and Facilities.

14.6.15.1. No installation of Aeronautical Meteorological equipment/ facility shall be carried-out at any aerodrome in Nigeria without the approval of the Authority.

14.6.15.2. The holder of an Aeronautical Meteorological Service Provider certificate shall at all times make available to its personnel, a properly maintained and calibrated equipment and facilities required for the aeronautical meteorological services covered by its certificate.

14.6.15.3. The aeronautical meteorological services provider's equipment and facilities shall meet the requirements for measuring and detecting the meteorological elements specified in 14.6.2.1.

14.6.15.4. The maintenance and calibration of aeronautical meteorological services equipment shall comply with the specifications in the manufacturers maintenance manual.

14.6.15.5. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that the maintenance personnel are properly trained to carry out maintenance and calibration works on the equipment

14.6.15.6. The Aeronautical Meteorological Service Provider's equipment and facilities shall be calibrated to the required operational standards.

14.6.15.7. The calibration shall be carried out at defined intervals of time and the results recorded and filed.

14.6.15.8. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure the implementation of the procedures for carrying out factory acceptance and site acceptance tests for its equipment or facilities as set out in its approved Manual of Operations.

14.6.16. Minimum Equipment for Aeronautical Meteorological Services .

14.6.16.1. The holder of an Aeronautical Meteorological Services Provider certificate shall, for each location for which a service is being provided, make available as the minimum, the following facilities and equipment :

(*i*) Wall clocks displaying UTC and local time ;

(*ii*) Wind speed and direction display ;

(*iii*) Temperature and dew point measuring equipment ;

(*iv*) Barometer ;

(*v*) Visibility targets ;

(*vi*) Back-up power ;

(*vii*) Telecommunication equipment capable of transmitting/receiving meteorological information to/from other agencies ;

(*viii*) Office furniture and appliances.

14.6.16.2. The status and state of calibration of the equipment shall be recorded and filed by the service provider

14.6.17. Fault and Defect Reporting of Equipment.

14.6.17.1. The holder of an Aeronautical Meteorological Services Provider certificate shall maintain a system for tracking and rectifying faults within the Aeronautical Meteorological service system.

14.6.17.2. The tracking, reporting and resolution of faults and defects shall comply with the procedures in the Provider's approved Manual of Operations.

14.6.18. Maintenance of Documents and Records.

14.6.18.1. The holder of an Aeronautical Meteorological Services Provider certificate shall make available the following operational documentation at each location of its service :

(*i*) manual of operations ;

(*ii*) directives and instructions file ;

(*iii*) operational log books ;

(*iv*) equipment/facility maintenance and calibration log books ;

(*v*) equipment manuals ;

(*vi*) local standard operating procedures ;

(*vii*) personnel training records ;

(*viii*) applicable WMO documents.

14.6.18.2. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that :

(*i*) the documentations are reviewed and authorised for use by appropriate personnel ;

(*ii*) current issues of relevant documentation are available to personnel ;

(*iii*) obsolete documentation is removed from all points of issue or use ;

(*iv*) changes to documentation are reviewed and approved by appropriate personnel ; and

(*v*) the current version of each document can be identified to preclude the use of obsolete editions.

14.6.18.3. The holder of an Aeronautical Meteorological Services Provider certificate shall put in place a system to record and retain operational data.

14.6.18.4. Records shall be maintained on the following :

(*i*) operational information ;

(*ii*) equipment installation, maintenance and calibration ;

(*iii*) survey, inspection and test report ;

(*iv*) feed back reports from end users ;

(*v*) aircraft incident or emergency report

(*vi*) training files ;

(*vii*)duty roster.

14.6.19. Responsibilities to Search and Rescue (SAR) Unit.

14.6.19.1. The holder of Aeronautical Meteorological Services Provider certificate shall provide such assistance as requested from the agency responsible for conducting SAR.

14.6.19.2. The holder of Aeronautical Meteorological Services Provider certificate shall develop appropriate procedures in its manual of operation for the release of meteorological information to aeronautical search and rescue unit.

14.6.19.3. The holder of Aeronautical Meteorological Services Provider certificate shall supply as rapidly as possible, any meteorological information requested by an air traffic services unit in connection with an aircraft emergency.

14.6.19.4. The holder of Aeronautical Meteorological Services Provider certificate shall retain information supplied to flight crew members, either as printed copies or in computer files, for a period of at least 30 days from the date of issue. Except that if the information is required for enquiries or investigations, it shall be retained until the enquiry or investigation is concluded.

14.6.20. Application of Human Factors Principles.

14.6.20.1. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that its integrated automatic systems shall conform to human factor principles and include backup facilities and procedures.

14.6.20.2. The holder of an Aeronautical Meteorological Services Provider certificate shall ensure that meteorological information supplied to the users shall be consistent with human factors principles and shall be in forms which require a minimum of interpretation by the users

14.6.21. Application for Approval, Amendment or Renewal of Certificate.

14.6.21.1. An applicant is eligible to become a holder of an Aeronautical Meteorological Services Provider certificate if the applicant is able to :

(*a*) Comply with the requirement of these Regulations ;

(*b*) Provide sufficient information that will enable the Authority assess the suitability of the applicant ;

(*c*) Demonstrate the capacity to implement the provisions of the Authority's Aeronautical Meteorological Services Manual of Standards.

14.6.21.2. An application for the issuance of an Aeronautical Meteorological Services Provider certificate or an amendment thereof shall be made in the manner prescribed by the Authority and shall include :

(*a*) a copy of the applicant's Manual of Operations ;

(*b*) a written statement setting out aeronautical meteorological services that the applicant proposes to provide ;

(*c*) enough information to identify, for each aeronautical meteorological service the type and the location from which the service is proposed to be provided ;

(*d*) a written statement setting out the hours during which each aeronautical meteorological service is proposed to be available ;

(*e*) a written statement describing the arrangements the applicant has made to comply with the requirements of these Regulations ;

(*f*) the appropriate fee prescribed by the Authority.

14.6.21.3. The applicant's manual of operations shall be approved by the Authority.

14.6.21.4. In the case of certificate renewal, the holder of the certificate shall ensure that the process for renewal is commenced at least 60 days prior to the date on which such certificate expires.

14.6.21.5. If an Aeronautical Meteorological Services Provider's certificate is subject to conditions, the provider shall comply with the conditions so specified.

14.6.22. Issuance of Aeronautical Meteorological Services Provider Certificate.

14.6.22.1. The Authority shall issue an Aeronautical Meteorological Services Provider certificate for aeronautical meteorological services, if the applicant complies with the requirements prescribed in these Regulations.

14.6.22.2. The Authority shall issue the certificate in the appropriate form.

14.6.22.3. The certificate shall authorise the provision of :

(*a*) a single aeronautical meteorological service by means of a single certified aeronautical meteorological services provider ; or

(*b*) a combination of aeronautical meteorological services by means of a network of certified aeronautical meteorological service providers.

14.6.22.4. A certificate issued under this Part shall include the following information.

(*a*) the provider's name and address of its principal place of business ;

(*b*) a list of the aeronautical meteorological services covered by the provider's certificate ; and

(*c*) for each aeronautical meteorological service the location from which the service will be provided.

14.6.23. Scope and Variation of Certificate.

14.6.23.1. The holder of an Aeronautical Meteorological Services Provider certificate shall be entitled to provide any service or combination of services listed in its manual of operation.

14.6.23.2. If an Aeronautical Meteorological Services Provider wants to vary its certificate, it shall apply to the Authority under this Regulation for that purpose :

(*a*) the application shall contain, or have with it, a copy of the proposed variation ;

(*b*) if the Authority approves the variation, the variation shall take effect from the day proposed by the applicant ;

(*c*) where no date is proposed by the applicant, the effective date of the variation shall be the date the approval is given to the provider.

14.6.24. Period of Validity of Certificate.

14.6.24.1 An Aeronautical Meteorological Services Provider certificate shall be valid for a period determined by the Authority, which period shall not exceed five years from the date of issuance or renewal thereof.

14.6.24.2. The Aeronautical Meteorological Services Provider certificate shall remain in force until it is expired, suspended, or cancelled by the Authority.

14.6.24.3 The holder of a certificate which expires shall forthwith surrender the certificate to the Authority.

14.6.25. Transferability of Certificate.

14.6.25.1. An Aeronautical Meteorological Services Provider certificate shall not be transferable.

14.6.25.2. A change in ownership of the holder of an Aeronautical Meteorological Services Provider certificate shall be deemed to be a change of significance that shall be notified to the Authority.

Suspension of Certificate.

14.6.26. An Aeronautical Meteorological Services Provider Certificate may be suspended in the event of violation of any provision of these Regulations.

14.6.27. Suspension, Cancellation or Variation of an Aeronautical Meteorological Services Provider Certificate.

14.6.27.1. The Authority may by written notice given to an aeronautical meteorological service provider, suspend, cancel or vary the certificate if there are reasonable grounds for believing that the certificate holder :

(*a*) has breached a condition of the certificate ; or

(*b*) has contravened a provision of this Part ; or

(*c*) does not meet, or continue to meet, a requirement of this Part for getting or holding the certificate ; or

(*d*) has otherwise been guilty of conduct that renders the Aeronautical Meteorological Services Provider's continued holding of the certificate likely to have an adverse effect on the safety of air navigation.

14.6.27.2 Before suspending, cancelling or varying an Aeronautical Meteorological Services Provider certificate, the Authority shall :

(*a*) give written notice to the certificate holder of the facts or circumstances that, in the opinion of the Authority, amount to grounds for the suspension, cancellation or variation of the certificate ; and

(*b*) invite the certificate holder to show cause in writing, within 7 days after the date of the notice, why the certificate should not be suspended, cancelled or varied ; and

(*c*) take into account any written representations made, within the time allowed under paragraph (b), by or on behalf of the Aeronautical Meteorological Services Provider explaining why the certificate should not be cancelled.

14.6.28. Right of Appeal of Holder of Certificate.

14.6.28.1. The holder of an Aeronautical Meteorological Services Provider certificate who feels aggrieved by the suspension of the certificate may appeal against such suspension to the Authority, within 7 days after such holder becomes aware of such suspension.

14.6.28.2. The procedure for the appeal shall be as prescribed in Part 1.10.

14.6.29. Register of Certificates.

14.6.29.1. The Authority shall maintain a register of all Aeronautical Meteorological Services Provider certificates issued under this Part.

14.6.29.2. The register shall contain information recorded on the Aeronautical Meteorological Services Provider certificate and any other information required by the Authority.

14.6.29.3. Persons who intend to access the register for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate fees as may be prescribed by the Authority

Substitution of Aeronautical Meteorological Services Provider.

14.6.30. The Authority may, when it considers it necessary in the interest of aviationsafety, appoint the holder of an Aeronautical Meteorological Services certificate as a substitute aeronautical meteorological services provider to provide aeronautical meteorological services in respect of a certificate which has been suspended by the Authority under this Part, for the duration of such suspension.

14.6.31. Approval of External Source (Contract) for Aeronautical Meteorological Service Provider.

14.6.31.1. A holder of an Aeronautical Meteorological Services Provider certificate may contract a function to an external source in accordance with IS 14.6.31.1.

14.6.31.2. The Authority shall approve the external source to perform the function(s).

14.6.31.3. The Authority shall be informed 60days before the termination of such agreement.

14.7. PROVISION OF AERONAUTICAL TELECOMMUNICATIONS SERVICES

14.7.0. GENERAL

Applicability.

14.7.0.1. This subpart is applicable to the provision of aeronautical telecommunication services.

14.7.1. Requirements for Certificate as an - Aeronautical Telecommunications Services Provider.

14.7.1.1. No person shall provide Aeronautical Telecommunications Services or operate an aeronautical facility, except in accordance with the provisions of these Regulations .

14.7.1.2. The Provision of 14.7.1.1 does not apply if a person operates an aeronautical facility on an aeronautical radio frequency and—

(*a*) the aeronautical facility :

(*i*) is a radio communication transmitter that does not support air traffic services ; or

(*ii*) is a radio navigation aid that does not support IFR flight or air traffic services ;

(*b*) the aeronautical telecommunication facility does not constitute harmful interference with any other Aeronautical Telecommunications Services or aeronautical facility ;

(*c*) a certificate has been granted by the appropriate Authority for the aeronautical facility ; and

(*d*) an identification code or a call sign has been assigned to the aeronautical facility under subpart 14.7.9.2 (*g*) ;

14.7.1.3. The provision of 14.7.1.1 does not apply if a person operates a ground mobile radio on an aeronautical radio frequency and :

(*a*) the radio is not used to support air traffic services ;

(*b*) the radio is operated in accordance with the applicable communication procedures prescribed in these Regulations ; and

(*c*) the radio transmission does not constitute harmful interference with any other Aeronautical Telecommunications Services or aeronautical facility.

14.7.2. No person may provide Aeronautical Telecommunications services at aerodromes or portion of airspace in Nigeria, unless such person holds a certificate issued by the Authority.

Requirement for Aeronautical Telecommunication Services Provider Certificate.

14.7.3. PROVISION OF AERONAUTICAL TELECOMMUNICATIONS SERVICES

14.7.3.1. The holder of an Aeronautical Telecommunications Services Provider Certificate issued under these Regulations shall be responsible for the provision of Aeronautical Telecommunications Services to ensure that the telecommunications information and data necessary for safe, regular and efficient operation of air navigation is available in the form suitable for the operational requirements of :

(*a*) Flight operations personnel including flight crews and other personnel responsible for the provision of pre-flight briefing ; and

(*b*) Providers of Air Traffic Services ;

14.7.4.—Responsibilities of Holder of Aeronautical Telecommunications Certificate.

(*a*) The holder of an Aeronautical Telecommunications Services Provider Certificate shall ensure that the services listed in its Manual of Operations, are in accordance with the procedures prescribed in these Regulations.

(*b*) The Manual of Operations shall include the following information :

(*i*) personnel requirements and the responsibilities of personnel as contained in IS 14.7.4 (*b*)(*i*) ;

(*ii*) training and checking of staff and how that information is tracked as contained in IS 14.7.4 . (*b*)(*ii*) ;

(*iii*) quality assurance/safety management system as contained in IS 14.7.4 (*b*)(*iii*) ;

(*iv*) contingency plans developed for partial or total system failure as contained in IS 14.7.4 (*b*)(*iv*) ;

(*v*) security plan as contained in IS 14.7.4 . (*b*)(*v*) ;

(*vi*) Minimum air navigation facility equipment list (MAN FEL) applicable to class of Aerodrome as contained in ; IS.14.7.4. (*b*)(*vi*) ;

(*vii*) Facilities and equipment and how those facilities are maintained ;

(*viii*) fault and defect reporting ;

(*ix*) maintenance of documents and records ; and (*x*) any other information requested by the Authority.

(*c*) The holder of Aeronautical Telecommunication Services provider certificate shall keep at least one complete and current copy of its Manual of Operations at each Aeronautical Telecommunications Services unit specified in its Manual of Operations ;

(*d*) comply with all procedures detailed in its Manual of Operations ;

(*e*) comply with the ICAO *Annex* 10 Volume III-Communication Systems. (Part I Digital Data Communication Systems and Part II-Voice Communication Systems), *Annex* 10, Volume IV (Surveillance And Avoidance Collision Systems) and with the Manual Of Standards prescribed by the Authority in the provision of Aeronautical Telecommunication Services.

(*f*) make each applicable part of the Manual of Operations available to the personnel who require those parts to carry out their duties ;

(*g*) continue to comply with the appropriate requirements prescribed in these Regulations ;

(*h*) keep the records of all regular internal inspections for a period of five years from the date of each inspection ;

(*i*) furnish the Authority with the en-route, terminal and aerodrome facility statistics, status, and performance index ;

(*j*)replace or upgrade any degraded facility ;

(*k*) keep the Authority informed of its plans for the development and modernisation of its facilities ;

(*l*) develop Standard Operating Procedure (SOP) Manual for each facility in the certificate as contained in IS 14.7.4.(*b*)(l).

14.7.5. Privileges of an Aeronautical Telecommunications Certificate Holder.

14.7.5.1. The Certificate shall specify the Aeronautical Telecommunications Services and aeronautical facility types that the Certificate holder is authorised to operate in support of air navigation services.

14.7.5.2 The holder of the Certificate may operate any of the aeronautical facility types specified on the Certificate, provided :

(*a*) each aeronautical facility operated is listed in the Certificate holder's Manual of Operations ; or

(*b*) the aeronautical facility is not listed in the Manual of Operations, its operation is for site test purposes controlled by the procedures required under these Regulations.

14.7.6. The holder of an Aeronautical Telecommunications Services provider certificate shall display the Certificate in a prominent place, generally accessible to the public at such holder's principal place of business and, if a copy of the original Certificate is displayed, it shall produce the original to the Authority's officials, if so requested.

Display of Aeronautical Telecommunications Services Provider Certificate

14.7.7. SITE VALIDATION , SAFETY INSPECTIONS AND AUDITS

14.7.7.1. An applicant for the Issuance of an Aeronautical Telecommunications Services Provider Certificate shall permit the Authority's Inspector to carry out, safety inspections and audits as may be necessary to verify the validity of any application made in accordance with these Regulations.

14.7.7.2. The holder of an Aeronautical Telecommunications Services Certificate shall permit the Authority to carry out such safety audits and inspections Aeronautical Telecommunications facility, safety inspections and audits as may be necessary to determine compliance with the appropriate requirements prescribed in this subpart and for post implementation monitoring to verify that the certificate holder continues to meet the defined level of safety.

14.7.7.3. The holder of an Aeronautical Telecommunications Services Certificate shall permit the Authority to carry out site validation inspection prior to installation and participate in the conduct of Factory Acceptance Test (FAT).

14.7.7.4. The holder of an Aeronautical Telecommunications Services Certificate shall permit the Authority's Inspector to carry out radio frequency audit to ascertain the usability and status of the assigned frequencies.

14.7.8. Persons Authorised to perform Equipment/Facility Inspections.

14.7.8.1. No person shall perform equipment/facility inspections prior to, or after commissioning, maintenance, preventive maintenance, and upgrade, except such person holds an ATSEP licence or is authorized by the Authority.

14.7.8.2. An ATSEP licensed personnel shall conduct the required inspections of aeronautical telecommunications facility for which such personnel is rated and current.

14.7.9. Application for Aeronautical Telecommunications Certificate, Amendment or Renewal.

14.7.9.1. An applicant is eligible to become an Aeronautical Telecommunications Services Provider if the applicant is able to comply with the requirements of these Regulations.

14.7.9.2. An application for the issuance of an Aeronautical Telecommunications Services Provider certificate or an amendment thereof shall be made in the manner prescribed by the Authority and shall include :

(*a*) a copy of the applicant's Manual of Operations ;

(*b*) a written statement setting out Aeronautical Telecommunications Services that the applicant proposes to provide ;

(*c*) enough information to identify, for each Aeronautical Telecommunications Service, the type and the location from which the services is proposed to be provided ;

(*d*) a written statement setting out the hours during which each aeronautical telecommunications service is proposed to be available ;

(*e*) a written statement describing the arrangements the applicant has made to comply with the requirements of these Regulations ;

(*f*) the appropriate fee prescribed by the Authority ;

(*g*) a written statement requesting for aeronautical radio frequency assignment for the facility to be provided.

14.7.9.3. In the case of certificate renewal, the holder of a certificate shall ensure that the process for renewal is commenced at least 60 days prior to the date on which such certificate expires ;

14.7.9.4. If an Aeronautical Telecommunications Services Provider's certificate is subject to conditions, the provider shall comply with the conditions so specified.

Issuance of Aeronautical Telecommunications Services Provider Certificate.

14.7.10.1. The Authority shall issue an Aeronautical Telecommunications Services provider a certificate to provide aeronautical Telecommunications services, if the applicant complies with the requirements prescribed in these Regulations.

14.7.10.2. The Authority shall issue the certificate in the appropriate form.

14.7.10.3. The certificate shall authorise the provision of :

(*a*) a single Aeronautical Telecommunications Service by means of a single Aeronautical Telecommunications Services unit ; or

(*b*) a combination of Aeronautical Telecommunications Services by means of a network of approved Aeronautical Telecommunications Services.

14.7.10.4. A certificate issued under this Part shall include the following information :

(*a*) the provider's name and address of its principal place of business ;

(*b*) a list of the Aeronautical Telecommunications Services covered by the provider's certificate ; and (*c*) for each Aeronautical Telecommunications Services the location from which the services will be provided.

14.7.11. Scope and Variation of Aeronautical Telecommunications Certificate.

14.7.11.1. The holder of an Aeronautical Telecommunications provider certificate shall be entitled to provide any service or combination of services listed in its Manual of Operations.

14.7.11.2. If an Aeronautical Telecommunications Services certificate holder wants to vary its Certificate, it shall apply to the Authority under this regulation for that purpose :

(*a*) the application shall contain, or have with it, a copy of the proposed variation ;

(*b*) if the Authority approves the variation, it shall take effect from the day proposed by the applicant ;

(*c*) where no date is proposed by the applicant, the effective date of the variation shall be the date the certificate is issued to the provider.

14.7.12. Period of Validity of Aeronautical Telecommunications Certificate.

14.7.12.1. A Certificate shall be valid for a period determined by the Authority, which period shall not exceed five years, from the date of issuance or renewal thereof.

14.7.12.2. The Certificate shall remain in force until it is expired, suspended, or cancelled by the Authority.

14.7.12.3. The holder of an expired Certificate shall forthwith surrender the Certificate to the Authority.

14.7.13. Transferability of Aeronautical Telecommunications Certificate.

14.7.13.1. Subject to the provisions of this Regulation, an Aeronautical Telecommunication Certificate shall not be transferable.

14.7.13.2. A change in ownership of the holder of a Certificate shall be deemed to be a change of significance that shall be notified to the Authority.

14.7.14. Suspension of Aeronautical Telecommunications Certificate. An Aeronautical Telecommunication provider certificate may be suspended in the event of violation of any provision of these Regulations .

14.7.15. Suspension, Cancellation or Variation of an Aeronautical Telecommunications Services Provider Certificate by the Authority.

14.7.15.1. The Authority may, , by written notice given to an Aeronautical Telecommunications Services Provider, suspend, cancel or vary the Aeronautical Telecommunications Services Provider Certificate if there are reasonable grounds for believing that the certificate holder :

(*a*) has breached a condition of the Certificate ; or

(*b*) has contravened a provision of this Part ; or

(*c*) does not meet, or continue to meet, a requirement of this Part for getting or holding the Certificate ; or

(*d*) has otherwise been guilty of conduct that renders the Aeronautical Telecommunication Services Provider's continued holding of the Certificate likely to have an adverse effect on the safety of air navigation ;

(*e*) delays or fails to submit and implement Corrective Action Plan(CAP) necessary for safety of air navigation ;

(*f*) obstructs investigation on sudden or willful shutdown of air navigation facility.

14.7.15.2. Impairment of assigned aeronautical radio frequency.

14.7.15.2.1. No person shall alter, change, swap or reassign any radio frequency already in use without the approval of the Authority.

14.7.16. Right of Appeal of Holder of Aeronautical Telecommunications l Certificate.

14.7.16.1. The holder of an aeronautical Telecommunication services provider who feels aggrieved by the suspension of his certificate, may appeal against such suspension to the Authority within 7days after such holder becomes aware of such suspension.

14.7.16.2. The procedure for appeal shall be as prescribed in Part 1.10

14.7.16.3. Exemptions—

(*a*) The Authority may exempt, in writing, Aeronautical Telecommunications Service Provider from complying with specific provisions of these Regulations ;

(*b*) The exemption process shall be in accordance with Nig.CARs Part 1.4 ;

(*c*) An exemption is subject to the Aeronautical telecommunications Services Provider complying with the conditions and procedures specified by the Authority in the Aeronautical Telecommunications Certificate as being necessary in the interest of safety ;

(*d*) When Aeronautical Telecommunication Service does not meet the requirement of a standard or practice specified in these Regulations and other relevant advisory documents, the Authority may determine, after evaluating the operational manual and operational environment where such facilities or services are to be provided by the Aeronautical Telecommunication Service Provider, the conditions and procedures that are necessary to ensure a level of safety equivalent to that established by the relevant Regulations ;

(*e*) Deviation from these Regulations and the conditions and procedures shall be set out in an endorsement on the Aeronautical Telecommunications Certificate and published in the AIP.

14.7.17. Register of Aeronautical Telecommunications Certificate.

14.7.17.1. The Authority shall maintain a register of all Aeronautical Telecommunications Services Provider Certificate as issued under this Part.

14.7.17.2. The register shall contain information recorded on the Aeronautical Telecommunication Services Provider certificate and any other information required by the Authority

14.7.17.3. Persons who intend to access the register for the purpose of obtaining information shall apply in writing to the Authority and shall pay appropriate fees as may be prescribed by the Authority.

Substitution of Aeronautical Telecommunications Services Provider.

14.7.18. The Authority may, when it considers it necessary in the interest of aviation safety, appoint the holder of an Aeronautical Telecommunications Services unit l Certificate as a substitute Aeronautical Telecommunications Services Provider to provide an Aeronautical Telecommunications Services in respect of a Certificate which has been suspended by the Authority under this Part, for the duration of such suspension.

Certification of Aeronautical Telecommunications equipment, facility and procedures.

14.7.19. The Authority shall certify all the Air Navigation Services Communications, Navigation, Surveillance, Landing aids, products, facilities and procedures before their deployment in the Nigerian airspace and aerodromes.

Provision for GNSS procedure.

14.7.20. The holder of a Aeroautical Telecommunication Certificate shall be required to provide navigation information specifications to permit the use of GNSS procedures.

Continued Serviceability, Availability and Maintainability of Aeronautical Telecommunications Facility and Components.

14.7.21. The Aeronautical Telecommunications Services Provider shall be responsible for maintaining the Aeronautical Telecommunications facility by ensuring that—

(*a*) All maintenance, overhaul, alterations and repairs which may affect or alter continued serviceability are carried out as contained in the equipment maintenance manual :

(*b*) Maintenance personnel make appropriate entries in the logbook certifying the serviceability of the equipment ;

(*c*) The approval for return to services is completed to the effect that the maintenance carried out has satisfactorily been completed in accordance with the equipment maintenance manual ;

14.7.22. Faults and Defects Reporting.

4.7.22.1. The Aeronautical Telecommunications Services Provider shall maintain system for tracking and rectifying faults within the Aeronautical Telecommunications Services system.

14.7.22.2. Procedure for reporting and the resolutions of faults and defects shall be documented in the manual of operations. This includes procedures for ensuring that the operational Status of Communications, Navigation and Surveillance facilities are provided to the Air Traffic Services Provider.

14.7.22.3. The Aeronautical Telecommunications Services Provider shall forward daily, weekly and monthly defect reports to the Authority.

14.7.22.4. The Aeronautical Telecommunications Services Provider shall report power system failures to the Authority as they occur.

14.7.23. Persons Authorized to Perform Maintenance, Preventive Maintenance and Alterations.

14.7.23.1. No person shall perform maintenance on an Aeronautical Telecommunications facility, equipment part or component except such a person is :

(*a*) an Air Traffic Safety Electronic Personnel licensed by the Authority ;

(*b*) working under supervision of an ATSEP license holder ;

(*c*) a licensed ATSEP maintenance personnel performing or supervising the maintenance of an aeronautical Telecommunications facility for which the personnel is rated.

14.7.23.2 An aeronautical Telecommunications facility manufacturer or its representative may :

(*a*) replace, upgrade, or alter any Aeronautical Telecommunications facility part manufactured by that manufacturer ;

(*b*) Perform any inspection as prescribed in the Authority's Manual of Standards (MOS) and the Air Navigation Services Provider's Manual of Operations (MOO).

14.7.24. The holder of an Aeronautical Telecommunications Services Certificate , shall carry out flight calibration of navigation and landing aids and surveillance systems in accordance with the provision of Aeronautical Telecommunications Manual of Standards. Flight Inspection and Calibration.

14.7.25. Maximum Periodicity of Ground Check and Flight Calibration. Radio Navigation Aids of the types covered by these Regulations and available for use by aircraft engaged in air navigation shall be subject to ground check and flight calibration as indicated below :

(*i*) Non-directional Beacon and distance measuring equipment shall be ground- checked once in 6 months and flight calibrated once in 12 months.

(*ii*) Conventional Very High Frequency Omni-directional Radio range shall be ground- checked and flight-calibrated once in 12 months.

(*iii*) Doppler Very High Frequency Omni-directional Radio range shall be ground- checked once in 12 months and be flight calibrated once in 3 years.

(*iv*) Instrument Landing System-Localizer and Glide slope shall be ground checked once in 3 months and flight calibrated once in 6 months.

(*v*) Radar shall be calibrated once in 3 years or after a major break down or modification.

14.7.26. Approval for Return of Equipment/Facility to Services

14.7.26.1. No person shall approve for return to services any Aeronautical Telecommunications facility that has undergone maintenance, preventive maintenance, or alteration/ or upgrading unless—

(*a*) The appropriate entry has been made in the maintenance logbook ;

(*b*) The facility is tested, ground- checked and flight checked.

14.7.26.2. No person shall describe in any required state in a maintenance logbook of an Aeronautical Telecommunications facility as having been altered/ upgraded unless it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.

14.7.26.3. No person shall approve the return to service of equipment/ facility after a major alteration or equipment part replacement unless such person has tested the equipment to determine satisfactory performance in accordance with the current manufacturer's recommendations.

Authority to Return Equipment to Service.

14.7.27. No person, other than the Chief Executive Officer of an Aeronautical Telecommunications Services Provider shall authorise the return to service, of an Aeronautical Telecommunications equipment/ facility especially after a major component of the equipment/facility has been replaced or undergone maintenance or alteration.

14.7.28. Maintenance of Documents and Entries.

14.7.28.1. Each person who maintains, performs preventive maintenance, or alters/upgrades Aeronautical Telecommunications facility shall, when the work is performed satisfactorily, make an entry in the maintenance logbook of that equipment as follows :

(*a*) A description (or reference to data acceptable to the Authority) of work performed, including—

(*i*) Appropriate details of alterations and repairs ;

(*ii*) The current status of the aeronautical Telecommunications facility on return to services.

(*b*) Completion date of the work performed ;

(*c*) Name, signature, and type of license held if any by the person making such records and person approving the work.

14.7.28.2. The holder of an Aeronautical Telecommunications Services Provider Certificate shall provide the following operational documentation at locations at an Aeronautical Telecommunications Services unit :

(*a*) procedures manual ;

(*b*) Aeronautical Telecommunications Manual of Standards ;

(*c*) Aeronautical Telecommunications SOP Manual ;

(*d*) AIP and AIP Supplements ;

(*e*) AIC's and NOTAM ;

(*f*) Civil Aviation Regulations, 2006 ;

(*g*) Aeronautical Search and Rescue Manual, issued by the Authority ;

(*h*) airport emergency plan, where applicable ;

(*i*) directives and instructions file ;

(*j*) occurrence log books ;

(*k*) equipment/facility status log books ;

(*l*) Circulars and bulletins file ;

(*m*) equipment manuals ;

(*n*) technical standards and practices ; and

(*o*) all applicable ICAO documents.

14.7.28.3. The Aeronautical Telecommunications Services Provider shall ensure that :

(*a*) the documentation is reviewed and authorised by appropriate personnel before issue ;

(*b*) current issues of relevant documentation are available to personnel ;

(*c*) obsolete documentation is removed from all points of issue or use ;

(*d*) changes to documentation are reviewed and approved by appropriate personnel ; and

(*e*) the current version of each document can be identified to preclude the use of obsolete editions.

14.7.28.4. The Aeronautical Telecommunications Services provider shall demonstrate that there is a system in place to record and retain operational data.

14.7.28.5. Records shall be maintained on the following :

(*a*) regular reports and returns to the Authority ;

(*b*) local incidents with remedial actions ;

(*c*) personnel files including supervisory reports ;

(*d*) training files ;

(*e*) licence and medical validity details ;

(*f*) minutes of facility maintenance meetings ;

(*g*) rosters and roster keys ; and (*h*) leave records.

14.7.29. Responsibilities to Aeronautical Search and Rescue Unit
The Aeronautical Telecommunications Services Provider shall provide such assistance as requested from the agency responsible for conducting SAR activities.

14.7.30. General Requirement for Maintenance and Inspection.

14.7.30.1. No person may operate an Aeronautical Telecommunications facility unless the facility and its components are maintained in accordance with equipment certification procedures and the facility is inspected in accordance with the Authority's certification programme in accordance with IS 14.7.30.1.

14.7.30.2. The facility maintenance procedure in the Aeronautical Telecommunications Services Provider's Manual of Operation shall include a description of the equipment and components and recommended methods for the accomplishment of maintenance tasks. Such information shall include guidance on fault diagnosis.

14.7.30.3. The Aeronautical Telecommunications Services Provider 's Manual of Operation shall include the maintenance tasks and the recommended intervals at which these tasks are to be performed.

14.7.30.4. Maintenance tasks and frequencies that have been specified as mandatory by the manufacturer of the equipment shall be identified in the Manual of Operations which includes basic details of the maintenance carried out.

14.7.31. Performance Rules Maintenance, Preventive Maintenance or Alterations/ Upgrade.

14.7.31.1. Each person performing maintenance, preventive maintenance, or alteration/upgrade on an Aeronautical Telecommunications facility shall use :

(*a*) the methods, techniques, and practices prescribed in the Manual of Standards ;

(*b*) the current manufacturer's maintenance manual or Manual of Operations for Continued Serviceability prepared by the Services Provider and approved by the Authority. in accordance with IS 14.7.31.1

14.7.31.2. Each person shall use the tools, equipment, and test apparatus necessary to ensure completion of the work in accordance with accepted industry practices. If the equipment manufacturer involved recommends special equipment or test apparatus, the person performing maintenance shall use that equipment or apparatus or its equivalent acceptable to the Authority.

14.7.31.3. Each person performing maintenance, preventive maintenance, or alteration on an aeronautical facility shall do that work in such a manner, and use materials of such a quality, that the condition of the Aeronautical Telecommunications facility worked on will be at least equal to its original or properly altered condition with regards to acceptable standards by the Authority.

14.7.31.4. The methods, techniques, and practices contained in a Manual of Operations and equipment certification maintenance procedure, as approved by the Authority, will constitute an acceptable means of compliance with the requirements of this sub-section.

IMPLEMENTING STANDARDS (IS)

AIR TRAFFIC SERVICES

IS14.1. IMPLEMENTING STANDARDS : AIR TRAFFIC SERVICES

Application for approval as an Air Traffic Service Provider.

IS14.1.15.2. On application for issue and renewal of an ATS provider certificate, the applicant shall provide sufficient information to the Nigerian Civil Aviation Authority so that the Authority can assess and determine that the information required is included in the applicant's Manual of Operations.

(2) To assist applicants the following is a guideline to ensure that applicants include the information required.

(3) An applicant for an approval shall provide the Authority with a Manual of Operations containing :

(*a*) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*i*) the Manual of Operations defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulation ;

(*ii*) the Manual of Operations and Manual of Standards and appropriate operational documentation, shall be complied with by the organisation's personnel at all times ;

(*b*) the titles and names of the senior person or persons ;

(*c*) the duties and responsibilities of the senior person or persons in (*b*) including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation ;

(*d*) an organisation chart showing lines of responsibility of the senior persons in (*b*) and covering each location listed under (*f*) ;

(*e*) a summary of the organisation's staffing structure at each location listed under (*f*) ;

(*f*) a list of each type of air traffic service and the duration of that service to be operated under the authority of the air traffic service provider approval ;

(*g*) the airspace in which each service will be provided ;

(*h*) the aerodrome for which the service will be provided ;

(*i*) procedures and a plan to undertake checking and training of staff in the positions for which they will provide a service ;

(*j*) the detailed procedures required regarding internal quality assurance and safety management system ;

(*k*) a contingency plan for implementation in the event of a disruption to services provided ;

(*l*) a security programme that details protection for facilities, services and personnel ;

(*m*) a summary of the operational details of each aeronautical facility associated with each location listed under (*f*) and (*g*) ;

(*n*) procedures to control, amend, and distribute documentation and retain records ;

(*o*) a Aeronautical search and rescue Manual.

(4) The Authority may not grant an approval unless the Authority is satisfied that the applicant's Manual of Operation complies with this Part.

The Authority to carry out Air Traffic Control Function.

IS:14.1.33.2.—(1) A person may carry out an air traffic control function in Nigeria if, at the time the person carries out the function :

(*a*) he or she holds an ATC licence with a rating for the function and an endorsement for the place where, or the airspace in relation to which, he or she carries it out ; and

(*b*) the licence, rating and endorsement are in force ; (*c*) he or she :

(*i*) satisfies the recency and currency requirements in relation to the endorsement ; and

(*ii*) satisfies the currency requirement in relation to the rating.

(2) A person may carry out an air traffic control function in Nigeria under the supervision of a person who meets the requirements above.

(3) A person who may carry out an air traffic control function in Nigeria under supervision is a person who the Authority has authorised in writing to carry out the relevant function and is ;

(*a*) a person who :

(*i*) holds an ATC licence with a rating for the function and an endorsement for the place where, or the airspace in relation to which, he or she carries it out ; but at the relevant time, in relation to the rating or endorsement, does not satisfy the recency or currency requirement ;

(*b*) a person who :

(*i*) holds an ATC licence ; and

(*ii*) carries out the function in the course of training for a rating or endorsement (whether or not the person holds a rating or endorsement at the time) ;

(*c*) a person (other than a person who held an ATC licence that has been cancelled) who :

(*i*) has completed an approved course of training in the theory of air traffic control ; and (*ii*) carries out the function in the course of undergoing practical training for an ATC licence.

IS: 14.1.47.3. The Contingency plan shall include :

Contingency Plan.

The actions to be taken by the members of the ATS provider's personnel responsible for providing the service, including the notification of suspected communicable diseases, or other public health risk, on board an aircraft are as follows :

(1) The flight crew of an aircraft shall, upon identifying a suspected case(s) of communicable disease, or public health risk, on board the aircraft, promptly notify the ATS unit with which the pilot is communicating, the information listed below :

(*i*) aircraft identification ;

(*ii*) departure aerodrome ;

(*iii*) destination aerodrome ;

(*iv*) estimated time of arrival ;

(*iv*) number of persons on board ;

(*v*) number of suspected case(s) on board ; and

(*vi*) nature of the public health risk, if known.

(2) The ATS unit, upon receipt of information from a pilot regarding suspected case(s) of communicable disease, or public health risk, on board the aircraft, shall forward a message as soon as possibible to the ATS unit serving the destination/departure, unless procedures exist to notify the appropriate authority designated by the State and the aircraft operator or its designated representative.

(3) When a report of a suspected case(s) of communicable disease, or other public health risk, on board an aircraft is received by an ATS unit serving the destination/departure, from another ATS unit or from an aircraft or an aircraft operator, the unit concerned shall forward a message as soon as possible to the public health authority (PHA) or the appropriate authority designated by the State.

IS14.1.49.2.—(1) The ATS provider shall, for each location for which a service is provided, supply and indicate from the list below a list of facilities and equipment. An indication shall be provided on the quality of the facilities and equipment.

Facilities.

(2) All equipment used in the provision of Air Traffic Services, including navigation and approach services shall perform and be maintained in accordance with the standards and practices as contained in these regulations.

(3) *General Item*

The means to monitor the domestic frequency 121.7 MHz independent of mains and standby radio equipment

Emergency lighting

Notice boards

Head sets

Lockers and a safe

Emergency exits

Lightening protection

Fire alarm

A briefing room

Equipment repair space

Technical equipment storage

Restrooms

Running water

Entry control

Any other items

(4) *Control Tower Item*

Headsets

Microphones

Transceivers

Speakers

Radio selector panel

Telephone selector panel/handsets

Intercom

Auto-switch headset/speaker

Recorder (radio and telephone) where applicable

Power

Back-up power

Signal lamp

Device for alerting RFFS in the event of aerodrome emergency

Rapid communications with RFFS

Wind speed and direction display

Barometric altimeter

Altimeter setting indicator

Clock

Aerodrome lighting panel

Navaid(s) monitor panel

Lighting, including emergency lights

Daylight radar/display consoles, as appropriate

Flight data panel, flight progress strip card holders and flight progress strip cards

Clipboards/displays (NOTAM, etc.)

Automatic terminal information system recorder where applicable

Fire alarm and extinguishers

Desks/consoles/shelves

Chairs

Shades

Air Conditioning, heating/cooling

Binoculars

Sound-absorbing coverings (floor/wall)

Any other items

(5) *Aerodrome/Approach Combined Item*

Headsets

Microphones

Transceivers

Speakers

Radio selector panel

Telephone selector panel /headsets

Intercom

Auto-switch headset/speaker

Voice recorder (radio and telephone)

Power

Back-up power

Device for alerting RFFS in the event of aerodrome emergency

Rapid communications with RFFS

Wind speed and direction display

Altimeter setting indicator

Clock

Navaid (s) monitor panel

Lighting, including emergency lights

Radar displays, controls, consoles, as appropriate

Secondary radar controls, as appropriate

Radar simulator, as appropriate

Flight data panel, flight progress strip card holders and flight progress strip cards

Automation equipment, if required

Clipboards/display (NOTAM etc)

Automatic terminal information system recorder

Fire alarm and extinguishers

Desks/consoles/shelves

Chairs

Air conditioning, heating/cooling

Sound-absorbing coverings (floor/wall)

Plotting and writing area

Navigation plotting equipment

Aeronautical fixed telecommunication network

Any other items

(6) *Area Control Centre/Flight Information Centre Item*

Area Control Centre/ Flight Information Centre

Writing area/counter space

Plotting table

Navigation plotting equipment

Large-scale area map

Headsets

Microphones

Speakers

Radio communications selector panels

Telephones and selector panels

Aeronautical fixed telecommunications network

Access to direction - finding equipment

Flight progress console and equipment

Clocks

Lighting including emergency lighting

Chairs

Storage for reference documents

Lavatory

Running water

Fire alarm and extinguisher

Air conditioning heating/cooling

Power

Back-up power

Any other items

IS14.1.50.—(1) The tower shall permit the controller to survey those portions of the aerodrome and its vicinity over which control is exercised.

Control Tower.

(2) The tower shall be equipped so as to permit the controller rapid and reliable communications with aircraft with which he or she is concerned.

(3) The controller shall be able to discriminate between aircraft and vehicles while they are on the same or different runways/taxiways.

IS 14.1.52.1.—(*a*) procedures manual ;

Maintenance of Documents and Records (Operational Documents).

(*b*) air traffic control instructions manual ;

(*c*) local air traffic control instructions manual ;

(*d*) AIP and AIP Supplements ;

(*e*) AICs and NOTAM ;

(*f*) Nigeria Civil Aviation Regulations ;

(*g*) Aeronautical search and rescue Manual, approved by the Authority ;

(*h*) airport emergency plan ;

(*i*) directives and instructions file ;

(*j*) occurrence log ;

(*k*) unserviceability log ;

(*l*) circulars and bulletins file ;

(*m*) equipment manuals ;

(*n*) technical standards and practices ; and

(*o*) all applicable ICAO documents

Contents of Local Air Traffic Control Instructions (LATCI).

IS14.1.56.1.—(1) A Local Air Traffic Control Instructions shall contain the following :

(*a*) Detailed unit operational procedures and requirements ;

(*b*) Detailed unit administrative requirements, including the responsibilities of each operating position ;

(*c*) Amplification and/or explanation of provisions of the national requirements, where necessary ;

(*d*) Procedures for the control of movement of persons and vehicles on the manoeuvring area; where required ;

(*e*) Co-ordination procedures between internal and external agencies (and when this is to occur-(change in status of facilities, navigation aids, MET observation) ;

(*f*) Procedures for the provision of services to aircraft in an emergency :

(*i*) within the vicinity of the airport-Aerodrome emergencies of Air Traffic Services ; and

(*ii*) outside the vicinity of the airport-Aeronautical Aeronautical search and rescue procedures ;

(*g*) Contingency arrangements in the event of a communications, navaid, facility failure (including runway/taxiway closure) ;

(*h*) Procedures to provide assistance to strayed or unidentified aircraft ;

(*i*) Procedures for pilots in the event of an air-ground radio communications failure.

(*Note* : These procedures shall be included in the AIP).

(*j*) Letters of Agreement with other agencies adjacent to the unit for the transfer of responsibility of control.

(*k*) Procedures for the LATCI amendment which shall include :

(*i*) a requirement that Air Traffic Controllers are to indicate, in the appropriate manner, that an amendment has been noted.

(*ii*) a requirement that any amendment by hand shall be accompanied by the authorised person's signature and date. Authorised person means any air traffic controller authorised by the ATS provider to make the relevant amendment by hand.

(*i*) A requirement that notice of these amendments shall be transmitted to the head office responsible for the relevant service for ratification.

IS14.2.2.2. On application for and renewal to operate as a Procedures Design Certificate holder, the applicant shall provide sufficient information to the Nigerian Civil Aviation Authority so that the Authority can assess the suitability of the applicant.

Application for Procedures Design Certificate .

(1) The Authority shall confirm that the information required in the Manual of Operations are complete.

(2) the information required 14.2..2.2(1) are :

(*a*) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*i*) the Manual of Operations defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulations ;

(*ii*) the Manual of Operations and Manual of Standards and appropriate operational documentation, shall be complied with by the organisation's personnel at all times ;

(*b*) the titles and names of the senior person or persons ;

(*c*) the duties and responsibilities of the senior person or persons in 14.2..2.2(1) (*b*) including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation ;

(*d*) an organisation chart showing lines of responsibility of the senior persons in 14.2..2.2(1)(*b*) and covering each location listed under 14.2..2.2(1) (*f*) ;

(*e*) a summary of the organisation's staffing structure at each location listed under14.2..2.2(1)(*f*) ;

(*f*) a list of each type of air traffic service and the duration of that service to be operated under the authority of the air traffic service provider certificate ;

(*g*) the airspace in which each service will be provided ;

(*h*) the aerodrome for which the service will be provided ;

(*i*) procedures and a plan to undertake checking and training of staff in the positions for which they will provide a service ;

(*j*) the detailed procedures required regarding internal quality assurance and safety management system ;

(*k*) a contingency plan for implementation in the event of a disruption to services provided ;

(*l*) a security programme that details protection for facilities, services and personnel ;

(*m*) a summary of the operational details of each aeronautical facility associated with each location listed under 14.2..2.2(1) (*f*) and 14.2..2.2(1) (*g*) ;

(*n*) procedures to control amend, and distribute documentation and retain records.

(3) The Authority may not grant a certificate unless the Authority is satisfied that the applicant's Manual of Operation complies with this Part.

Responsibility of Holder of Procedures Design Certificate.

IS 14.2.4.1.—(1) An applicant for the provision of Instrument Procedures Design shall provide in its Manual of Operations :

(*a*) current unit organisational chart and written delegated responsibilities and position descriptions ;

(*b*) staffing-levels for operational positions ;

(*c*) designated instructors and ratings and proficiency assessment officers ;

(*d*) staffing numbers and qualifications at unit level.

(2) A Procedures Design certificate holder shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the services covered by its certificate.

(3) A Procedures Design certificate holder shall have, at all times, enough suitably qualified and trained personnel to enable it provide, in accordance with the standards set out in the Regulations, the services covered by its certificate.

(4) The Procedures Design certificate holder shall ensure that its personnel are of sufficient numbers and experience and have been given appropriate authority to be able to discharge their allocated responsibilities.

(5) A Procedures Design certificate holder shall not carry out design work on a instrument flight procedure under the designer's certificate unless :

(*a*) the certificate holder has appointed a person to be the chief designer for the designer's organisation ;

(*b*) the appointment is approved by the Authority and is in force ; and

(*c*) the functions of the head designer are being carried out by the person or, if the head designer is temporarily absent from duty, another authorized person :

(*i*) who is appointed by the certificate holder to act as head designer ; and

(*ii*) whose appointment is approved by the Authority and is in force.

(6) The minimum qualifications for a Qualified Designer, in relation to a flight procedure, means an individual who :

(*a*) is the holder, or an employee of the holder, of a procedures design certificate that authorises the holder to design flight procedures of the same type as the procedure concerned ; and

(*b*) has successfully completed :

(*i*) an approved course of training in the methods and practices contained in ICAO Doc. 8168 (PANS-OPS) ; and

(*ii*) any training for persons carrying on design work on flight procedures that is specified in the Operations Manual under which the qualified designer performs the designer's duties ; and

(*iii*) meets the experience requirements for performing the functions of a qualified designer set out in the Manual of Standards.

(*c*) enough licensed personnel to plan, provide and supervise the services listed in its acertificate in a safe and efficient manner.

Requirement for Approval as a Procedure Designer for Air Navigation Services.

IS: 14.2.7.1.—(1) On application for and renewal to operate as an Procedures Design Certificate Holder, the applicant shall provide sufficient information to the Nigerian Civil Aviation Authority so that the Authority can assess the suitability of the applicant.

(2) The Authority shall confirm that the information required in the applicant's Manual of Operations are complete.

(3) The information required in the Manual of Operations are :

(*a*) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*i*) the Manual of Operation defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulation ; and

(*ii*) the Manual of Operation and Manual of Standards and appropriate operational documentation, shall be complied with by the organisation's personnel at all times ; and

(*b*) the titles and names of the senior person or persons ; and

(*c*) the duties and responsibilities of the senior person or persons in . IS14.2.7.1 (4)(*a*)(*i*) and IS14.2.7.1 (*b*) including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation ; and

(*d*) an organisation chart showing lines of responsibility of the senior persons in IS14.2.7.1(4)(*a*)(*i*) and IS14.2.7.1 (*b*) and covering each location listed under. IS14.2.7.1(4)(*a*)(*i*) and IS14.2.7.1 (*f*) ; and (*e*) a summary of the organisation's staffing structure at each location listed under IS14.2.7.1(4)(*a*)(*i*) and IS14.2.7.1 (*f*) ; and

(*f*) a list of each type of flight Procedures Design service and the duration of that service to be operated under the authority of the flight Procedures Design Certificate Holder ;

(*g*) procedures and a plan to undertake checking and training of staff in the positions for which they will provide a service ;

(*h*) the detailed procedures required regarding internal quality assurance and safety management system ;

(*i*) a contingency plan for implementation in the event of a disruption to services provided ;

(*j*) a summary of the facilities that will be used in association with the provision of flight Procedures Design and

(*k*) procedures to control, amend, and distribute documentation and retain records.

(4) The Authority may not grant a a Certificate unless it is satisfied that the applicant's Manual of Operation complies with this Part.

IS14.2.18. Verification/Validation of Instrument Flight Procedure Design

IS 14.2.18.1. Each new or revised procedure designed shall be verified by a qualified procedure designer other than the one that designed the procedure to ensure compliance with applicable Criteria.

IS 14.2.18.2. Validation of designed instrument flight procedure shall be undertaken as the necessary final quality assurance step in the procedure design process prior to publication.

IS 14.2.18.3. The purpose shall be to verify all obstacle and navigational data and assessment fly-ability of the procedure.

IS 14.2.18.4. Validation shall consists of ground validation and flight validation.

IS 14.2.18.5. Ground validation shall be undertaken to enable the Authority verify the accuracy, completeness of all obstacle and navigation data considered in the procedure design and any other factors normally considered in the flight validation process.

IS 14.2.18.6. Ground validation shall be undertaken by a person(s) trained in procedure design and with appropriate knowledge of flight validation issue. This enables the Authority catch errors in Criteria and documentation and evaluate on the ground to the extent possible, those elements that will be evaluated in a flight validation, so that issues identified in the ground validation shall be addressed prior to flight validation.

IS 14.2.18.7 Ground validation shall be carried out to determine if flight validation is needed for flight validation is needed for modifications and amendments to previously published procedures.

IS 14.2.19. FLIGHT VALIDATION

14.2.19.1. Flight validation of instrument flight procedures shall be carried out as part of the initial certification and shall be included as part of the periodic quality assurance programme established by the Authority.

14.2.19.2. Flight validation shall be accomplished by a qualified and experienced flight validation Pilot, certified or approved by the Authority.

14.2.19.3 The objectives of the flight validation of instrument flight procedures shall be to ;

(*a*) Provide assurance that adequate obstacle clearance has been provided ;

(*b*) Verify that the navigation data to be published, as well as that used in the design of the procedure is correct ;

(*c*) Verify that all required infrastructure, such as runway markings, lighting, communication and navigation services are in place and operative ;

(*d*) Conduct an assessment of fly-ability to determine that the procedure can be safely flown ; and

(*e*) Evaluate the charting, required infrastructure, visibility and other operational factors.

IS 14.2.28. Maintenance of Instrument Approach Procedure and Documentation/Recording.

14.2.28.1. A flight procedure design certificate holder shall keep a record of all essential data,results of calculations involved in the process of developing a flight instrument approach procedure.

14.2.28.2. The record shall be kept in a checklist form, one for non-precision and the other for precision approach for each segment.

14.2.28.3. The controlling obstacle,the MOC applied and the resulting minimum altitude shall be listed.

14.2.28.4. At the end of the form the OCA/H for the procedure shall be recorded.

14.2.28.5. These checklists shall be retained as part of a permanent file along with terrain charts and other documents which support the procedure. Sample checklist to be included.

PROCEDURE CHECKLIST NON-PRECISION

THRESHOLD ELEVANTION

Initial 1	*A*	*B*	*C*	*D*
Type straight(s)racetrack(*RT*)reversal(*R*)				
Obstacle elevation				
Location of Obstacle primary(*P*)secondary(*S*)				
MOC applied				
Required altitude				
Nominal altitude				
Speed restriction no(*N*) yes (*Y*) value				
Comments :				

Initial 2	A	B	C	D
Type straight(*S*) racetrack(*RT*)reversal(*R*)				
Obstacle elevation				
Location of obstacle primary(*P*) secondary(*S*)				
MOC applied				
Required altitude				
Nominal altitude				
Speed restriction no(*N*) yes(*Y*) value				
Comments :				

Intermediate yes(*Y*) no(*N*)	A	B	C	D
Length(L) or Time(T) value				
Alingment with final : straight(S) angle				
Obstacle elevation				
Primary(P)secondary(S)area				

MOC applied				
Reqiured altitude				
Nominal altitude				
Gradient(G) rate of descent(R) value				
Comments :				

Final	A	B	C	D
On or Off Aerodrome facility				
Length(L) or time(T) value				
Obstacle elevation				
Primary(P) or secondary(S) area				
Stepdown fix yes(Y) or no(N) MOC applied				
OCA(final)				
Comments :	Threshold elevation			

Missed Approach	A	B	C	D
MAPT facility(F) fix(FIX)distance/FAF(D)value				
Straight missed approach				
Obstacle elevation				
Primary(P) secondary(S)				
MOC applied (full MOC=30m)				
Required altitude				
OCAmissed approach				
Comments : (non standard gradient)				

Turning Missed Approach	A	B	C	D
Fix(F) altitude (A) distance D)				
Obstacle elevation in turn initiation area (if turn at an altitude)				
Minimum turn altitude (MOC=50m)				
Obstacle elevation in turn area				
Resulting turn altitude				
OCA(missed approach)				
Restricted speed no(N) yes(Y) value				
Comments :				

Result	A	B	C	D
Resulting OCA for the procedure				
Gradient(G) rate of descent(R)value on final				
Level acceleration segment height				
Comments ;				

PROCEDURE CHECKLIST FOR PRECISION APPROACH

Initial 1	A	B	C	D
Type straight(S) racetrack(RT) reversal(R)				
Obstacle elevation				

Location of obstacle primary(P) secondary(S)				
MOC applied				
Required altitude				
Nominal altitude				
Speed restrivtion no(N) yes(Y)value				
Comments :				

Initial 2	A	B	C	D
Type straight(S) racetrack(RT) reversal(R)				
Obstacle elevation				
Location of obstacle primary(P) secondary(S)				
MOCapplied				
Rquired altitude				
Nominal altitude				
Speed restriction no(N) yes(Y)				
Comments :				

Intermediate yes(Y) no(N)	A	B	C	D
Length (L) time(T) value				
Alingment with final straight(S) angle				
Obstacle elevation				
Primary(P) secondary(S)				
MOC applied				
Required altitude				
Nominal altitude				
Gradient(G) rate of descent(R)value				
Comments :				

Precision Segment	A	B	C	D
Distance FAP/Threshold				
OAS penetrated no(N) yes(Y)value				
Obsfacle height				
HL appliedOCHps				
OCHps (precision segment) applied				
OCHps CRM				
Comments :				

Straight Missed Approach After (PS)	A	B	C	D
Obstacle height				
SOC height				
HLapplied				
OCHm(missed approach)				
Comments :				

Turning Missed Approach	A	B	C	D
Fix(F) length (L)				
Obstacle height in turn initiation area(if turn at a height)				
Minimum turn height(MOC=50m)				
Obstacle height in turn area				
Resulting Turn height				
D2 (minimum 1200)				
SOC height				
HL applied				
OCHm (missed approach)				
Comments :				

Results	A	B	C	D
Resulting OCH for the progedure				
Level acceleration segment height				
Comments :				

GP Inoperative	A	B	C	D
FAF : Fix (Fix) facility (*F*) name				
Obstacle height				
MOC applied				
OCHf (final)				
MAPt facility(*F*) fix(FIX) distance/FAF(*D*) value				
Missed approach:straight(*S*) turn(*T*)				
If obstacle, height in turn intiation(*T*) area minimum (*T*) height (MOC=50)				
Obstacle height				
Rquired height				
OCHm (missed approach)				
Resulting OCH				
Comments :				

Circling	A	B	C	D
Obstacle elevation				
MOC applied				
OCA (check minimum value)				
Comments:				

AERONAUTICAL SEARCH AND RESCUE

IS 14.3.22. Search And Rescue Signals

IS : 14.3.22.1. Signals with surface crafts :

14.3.22.1. The following manoeuvres performed in sequence by an aircraft mean that the aircraft wishes to direct a surface craft towards an aircraft or a surface craft in distress :

(*a*) circling the surface craft at least once ;

(*b*) crossing the projected course of the surface craft close ahead at low altitude and :

(1) rocking the wings ; or

(2) opening and closing the throttle ; or

(3) changing the propeller pitch.

Note.—Due to high noise level on board surface craft, the sound signals in 2) and 3) may be less effective than the visual signal in 1) and are regarded as alternative means of attracting attention.

(*c*) heading in the direction in which the surface craft is to be directed. Repetition of such maneuvers has the same meaning.

IS : 14.3.22.2. The following manoeuvres by an aircraft means that the assistance of the surface craft to which the signal is directed is no longer required :

crossing the wake of the surface craft close astern at a low altitude and :

(1) rocking the wings ; or

(2) opening and closing the throttle ; or

(3) changing the propeller pitch.

Note.—The following replies may be made by surface craft to the signal in 1.1 :

for acknowledging receipt of signals :

(1) the hoisting of the "code pennant" (vertical red and white stripes) close up (meaning understood) ;

(2) the flashing of a succession of "T's" by signal lamp in the Morse code ;

(3) the changing of heading to follow the aircraft.

for indicating inability to comply :

(1) the hoisting of the international flag "N" (a blue and white checkered square) ;

(2) the flashing of a succession of "N's" in the Morse code.

Note.—See Note following IS : 14.3.22.1 (*b*), 3

Ground-air visual signal code.

IS : 14.3.22.3.—(1) Ground-air visual signal code for use by survivors

No.	*Message*	*Code Symbol*
1.	Require assistance	V
2.	Require medical assistance	X
3.	No or Negative	N
4.	Yes or Affirmative	Y
5.	Proceeding in this direction	↑

(2) Ground-air visual signal code for use by rescue units

No	*Message*	*Code Symbol*
1.	Operation completed	LLL
2	We have found all personnel	LL
3	We have found only some personnel	++
4	We are not able to continue. Returning to base	XX
5	Have divided into two groups. Each proceeding in direction indicated	
6	Information received that aircraft is in this direction	→ →
7	Nothing found. Will continue to search	NN

(3) Symbols shall be at least 2.5 meters (8 feet) long and shall be made as conspicuous as possible.

Note 1.—Symbols may be formed by any means such as: strips of fabric, parachute material, pieces of wood, stones or such like material; marking the surface by tramping, or staining with oil.

Note 2.—Attention to the above signals may be attracted by other means such as radio, flares, smoke and reflected light.

Air-to-ground signals.

IS : 14.3.22.4.—(1) The following signals by aircraft mean that the ground signals have been understood :

(*a*) during the hours of daylight: by rocking the aircraft's wings;

(*b*) during the hours of darkness :

flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

(2) Lack of the above signal indicates that the ground signal is not understood.

No.	Message	Code Symbol
1.	Operation	completed

2. We have found all personnel
3. We have found only some personnel
4. We are not able to continue. Returning to base
5. Have divided into two groups. Each proceeding in direction indicated
6. Information received that aircraft is in this direction
7. Nothing found. Will continue to search

(3) Symbols shall be at least 2.5 meters (8 feet) long and shall be made as conspicuous as possible.

Note 1.—Symbols may be formed by any means such as: strips of fabric, parachute material, pieces of wood, stones or such like material; marking the surface by tramping, or staining with oil.

Note 2.—Attention to the above signals may be attracted by other means such as radio, flares, smoke and reflected light.

AERONAUTICAL INFORMATION SERVICES

Provision of Aeronautical Information Services (AIS).

IS 14.4.2.—(1) On application for, and renewal to operate as an Aeronautical Information Services Provider, the applicant shall provide sufficient information to the Authority in order to assess the suitability of the applicant.

(2) The Authority shall determine the information required to be included in the applicant's Manual of Operations.

(3) The Aeronautical Information Services provider shall provide Aeronautical Information Services in accordance with the Manual of Standards.

(4) An Aeronautical Information Services provider shall ensure that any aeronautical information service that it provides is provided in accordance with its Manual of Operations.

Responsibility of Holder of an AIS provider Certificate.

IS 14.4.6.1.—(*a*) An applicant for an approval shall provide the Authority with a Manual of Operations containing :

(1) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*i*) the Manual of Operation defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulation ; and

(*ii*) the Manual of Operation and Manual of Standards and appropriate operational documentation, shall be complied with by the organisation's personnel at all times ; and

(2) the titles and names of the senior person or persons ; and

(3) the duties and responsibilities of the senior person or persons whose responsibility is to deal directly with the Authority on behalf of the organisation ; and

(4) an organisational chart showing lines of responsibility of the senior persons.

(5) a summary of the organisation's staffing structure at each operational base.

(6) a list of each type of aeronautical information service to be operated under the authority of the aeronautical information service provider approval ; and

(7) a summary of the scope of activities at each operational base.

(8) procedures and a plan to undertake checking and training of staff in the positions for which they will provide a service ;

(9) the detailed procedures required regarding internal quality assurance and safety management system ;

(10) a contingency plan for implementation in the event of a disruption to services provided ; and

(11) a security programme that details protection for facilities and services ; and

(12) a summary of the operational details of each facility associated with each each operational base.

(13) procedures to control, amend, and distribute documentation and retain records.

The Authority may not grant an approval unless the Authority is satisfied that the applicant's Manual of Operation complies with this Requirement.

IS 14.4.6.1(*b*)(*i*) ; Personnel Requirements.

(1) An applicant for the provision of Aeronautical Information Services shall provide in its Operations Manual ;

(*a*) current unit organisational chart and written delegated responsibilities and position descriptions ;

(*b*) staffing-levels for operational positions ;

(*c*) designated supervisor and their qualifications ; (*d*) staffing numbers and qualifications at unit level.

(2) An Aeronautical Information Service provider shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the aeronautical information services covered by its approval.

(3) An Aeronautical Information Service provider shall have, at all times, enough suitably qualified and trained personnel to enable it provide, in accordance with the standards set out in the Regulations, the aeronautical information services covered by its approval.

(4) The Aeronautical Information Service provider shall ensure that its personnel are of sufficient numbers and experience and have been given appropriate authority to discharge their allocated responsibilities.

(5) The Aeronautical Information Service provider will advise the minimum qualifications required for aeronautical information services personnel operating positions.

(6) An Aeronautical Information Service provider shall arrange the work flow schedule of aeronautical information service officers to provide duty rest periods. A copy of the Aeronautical Information Service providers fatigue management procedure is to be included in the Manual of Operations.

(7) An aeronautical information service officer shall not perform his duties if he knows or suspects that he is suffering from or having regards to the circumstances of the period of duty to be undertaken is likely to suffer from such fatigue.

(8) A person shall not perform the duties of an aeronautical information service officer when under the influence of alcohol or drugs.

(9) At the unit level the Aeronautical Information Service provider shall engage, employ, or contract :

(*a*) a senior person to whom authority has been granted to ensure that all activities undertaken by the unit are carried out in accordance with the applicable requirements prescribed in this section, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements.

(*i*) Unrestricted access to work performed or activities undertaken by all other persons as employees of, and other persons rendering service within the unit ;

(*ii*) full rights of consultation with any such person(s) in respect of such compliance by him or her ;

(*iii*) a duty to establish liaison mechanisms with the Authority with a view to ascertain correct manners of compliance with the said requirements, and interpretations of such requirements by the Authority, and to facilitate liaison between the Authority and the unit concerned ; and

(*iv*) powers to report directly to the management of the his or her organisation, on his or her investigations and consultations generally, and in cases contemplated in subparagraph (*iii*), and with regard to the results of the liaison contemplated in sub-paragraph (*iv*) ;

(*b*) a person who is responsible for quality control, and who shall have direct access to the person referred to in paragraph (*a*) on matters affecting aviation safety ; and

(*c*) enough personnel to plan, provide and supervise the services listed in its approval as a service provider, in a safe and efficient manner.

IS 14.4.6.1.—(*b*)(*ii*) Training and Checking of Staff.

(1) The Aeronautical Information Service provider shall establish a procedure for initially assessing, and a procedure for maintaining, the competence of the personnel required to operate and maintain the unit concerned.

(2) The AIS service provider shall :

(*a*) regularly review the competence, experience, qualifications, capabilities and abilities of its staff to ensure that any skills and qualifications needed by the AIS are available for the tasks to be completed.

(*b*) provide training when deficiencies are noted, or when new employees start work.

(3) Required basic training shall be provided at NCAA recognized training institutes and may be carried out in stages.

(4) The service provider shall include details of the program, including necessary training and tests of competency, in its operations manual and shall establish procedures acceptable to the Authority in addition to the ICAO AIS personnel Training Manual DOC-7192 Part E-3 and follow the approved training programs for aeronautical information services officers as follows :

(*a*) Basic introduction ;

(*b*) Initial Aeronautical Information Service Training ;

(*c*) Air traffic Assistant training ;

(*d*) On-job-training ;

(*e*) Recurrent training ;

(*f*) Remedial training ;

(*g*) Human factor initial and recurrent ;

(*h*) QMS training.

(*i*) Any other course/s as changes in the system may warrant.

Ancillary Qualifications

(5) An aeronautical information service officer may also provide an ancillary function.

(6) These functions include the following :

(*a*) classroom instructor ; or

(*b*) on-the-job instructor.

(7) An aeronautical information service officer should have a minimum of five years on the job experience. Where possible, the officer should have experience in instructional techniques.

(8) An aeronautical information service officer should continue on-the-job training until he or she demonstrates competency in accordance with the Standards set out in the Manual of Standards.

IS 14.4.6.1(*b*)(*iii*) ; Contingency Plan.

(1) An Aeronautical Information Service provider shall develop and maintain Contingency Plans for implementation in the event of disruption, or potential disruption, of aeronautical information services and related supporting services for which it is responsible. The disruption may be caused intentionally (sabotage) or unintentionally (equipment failure).

(2) In developing such contingency plans, the Aeronautical Information Service provider shall liaise closely with the Aeronautical Information Services authorities responsible for the provision of services in adjacent or contiguous airspaces and other airspace users concerned.

(3) The plan shall include :

(*a*) the actions to be taken by the members of the provider's personnel responsible for providing the service ; and

(*b*) Possible alternative arrangements for providing the service ; and

(*c*) the arrangements for resuming normal operations for the service.

(4) These plans shall be submitted as part of the Manual of Operation.

IS 14.4.6.1(*b*)(*v*) Facilities, Equipment and Maintenance.

(1) In addition to adequate numbers of suitably experienced and competent personnel, AIS also requires appropriate accommodation and adequate facilities to get the work done and so provide quality services.

(2) To ensure conformity with this part of the ISO Standards, AIS service provider should determine, provide and maintain the facilities it needs to achieve product conformity, including :

(*a*) Workspace ;

(*b*) Equipment, hardware and software ; and

(*c*) Supporting services.

(3) At the most basic level, the service providers should ensure that the following are provided at all AIS aerodrome units :

(*a*) Suitable furniture for staff to work comfortably, efficiently and ergonomically ;

(*b*) Sufficient space between work-stations to avoid disruption to other staff ;

(*c*) Noisy equipment isolated away from staff or sound-proofed ;

(*d*) Adequate overhead or specialist lighting to be able to easily read source document ;

(*e*) A quiet area for proof-reading ; and

(*f*) Suitable computing equipment for word-processing and data capture.

(4) Wall displays at the AIS briefing office should consist of the following taking cognizance of the extent of coverage zone availability of suitable chart and size of available wall.

(5) The following should be provided for wall displays :

(*a*) 2 sets of charts of the coverage zone as small scale (1:1,000,000) showing ;

(*b*) air traffic service system, aerodrome/heliports and radio aids to navigation ;

(*c*) areas over which the flight of aircraft is dangerous, restricted or prohibited ;

(*d*) *a* 1:500,000 chart of the country in which the aerodrome/heliport is located ;

(*e*) an outline chart of the coverage zone at small scale to the area or route breakdown used in disseminating briefing material and showing FIR ;

(*f*) A large scale chart of the aerodrome traffic area showing controlled area approach aids and holdings, approach and departure procedures ;

(*g*) An aerodrome obstacle chart ;

(*h*) Aerodrome movement chart (1:3,000) ;

(*i*) Diagram of the terminal area showing location of various offices and facilities of interest to visiting aircrews.

(6) An Aeronautical Information Service provider shall, at all times, make available for the use by its personnel, the equipment and facilities necessary for providing aeronautical information services covered by its approval.

(7) The Aeronautical Information Service provider shall include in their Operations Manual a list of facilities from which Aeronautical Information Service will be provided.

(8) The equipment shall meet with the requirements specified in ICAO *Annex* 10 and the Regulations.

(9) All persons involved with the provision of service shall be fully conversant with current ICAO standards and recommended practices, instructions, directives and relevant information.

(10) The Aeronautical Information Service provider shall, for each location for which a service is provided, indication from the list below a list of facilities and equipment. This should also include an indication of the quality of the equipment.

10.2. *Aeronautical Information Equipment and Facilities include the following* :

Writing area/counter space

Access to Maps and Charts

Computer workstations with Internet access

Display boards

Telephones

Aeronautical fixed telecommunications network

Clocks

Lighting including emergency lighting

Chairs

Storage for reference documents

Photocopier

Power supply

Back-up power supply

Fire alarm and extinguisher

Air conditioning system

Restrooms

Running water

Consumables (paper, printer cartridges, etc.)

Standard briefing room close to the apron

IS 14.4.6.1.(*b*)(*vi*) Fault and Defect Reporting.

(1) The applicant shall maintain system for tracking and rectifying faults within the Aeronautical Information Service system.

(2) Procedures for the reporting and the resolution of faults and defects shall be documented in the Manual of Operations.

(3) The Aeronautical Information Service provider shall maintain a record of the number of reported equipment faults on a month by month basis.

IS 14.4.6.1. (*b*)(*vii*) Maintenance of Documents and Records.

The applicant for service provider approval shall provide the following operational documentation at locations at an aeronautical information service unit :

(*a*) Manual of Standards ;

(*b*) Logbook to record occurrences and events ; (including unserviceability of equipment) ;

(*c*) AIPs and AIP Supplements ;

(*d*) AICs and current NOTAM ;

(*e*) Current Civil Aviation Regulations, (*f*) Circulars and bulletins file ;

(*g*) Equipment manuals ;

(*h*) Technical standards and practices ; and

(*i*) All applicable ICAO documents.

(2) The Aeronautical Information Service provider shall ensure that :

(*a*) the documentation is reviewed and authorised by appropriate personnel before issue ;

(*b*) current issues of relevant documentation are available to personnel ;

(*c*) obsolete documentation is removed from all points of issue or use ;

(*d*) changes to documentation are reviewed and approved by appropriate personnel ; and

(*e*) the current version of each document can be identified to preclude the use of obsolete editions.

(3) The Aeronautical Information Service provider shall demonstrate that there is a system in place to record and retain operational data.

(4) Records shall be maintained on the following :

(*a*) regular reports and returns to the Authority ;

(*b*) local incidents with remedial actions ;

(*c*) personnel files including supervisory reports ;

(*d*) training files ;

(*e*) duty rosters ; and

(*f*) leave records.

(5) The following basic reference materials should be kept at both NOF and AIS aerodrome/heliport units :

(*a*) Annexes 1-18 ;

(*b*) Doc 8400 - ICAO Abbreviation and Codes (PANS-ABC) ;

(*c*) Doc 4444 - Rules of the Air and Air Traffic Services (PANS-RAC) ;

(*d*) Doc 8168 - Aircraft Operations (PANS - OPS) ;

(*e*) Doc 7030 - Regional supplementary Procedures (Supps) ;

(*f*) Doc 7910-Location Indicators ;

(*g*) Doc 8585 - Designators for Aircraft operation ;

(*h*) Doc 8643 - Aircraft type designators ;

(*i*) Doc 8126 - AIS manual ;

(*j*) Doc 8697 - Aeronautical charts manual ;

(*k*) Doc 8896 - Manual of Aeronautical Met practice l ;

(*l*) Doc 7383 - Aeronautical Information services provided by States ;

(*m*) Doc 7101- Aeronautical chart catalogue ;

(*n*) Doc 7100 - Manual of Airport and Air Navigation facility tariffs ;

(*o*) Doc 7474 - African-Indian Ocean region ;

(*p*) Doc 8733 - Caribbean and South American regions ;

(*q*) Doc 7754 - European Union ;

(*r*) Doc 8700 - Middle East and Asia Regions ;

(*s*) Doc 8755 - North Atlantic, North American and Pacific Regions.

Local Operating Procedures.

IS: 14.4.11.—(1) The Aeronautical Information Service provider shall develop local operating procedures for the collection and dissemination of relevant data.

(2) An Aeronautical Information Service provider shall consider the availability and reliability of external data sources required to provide an Aeronautical Information Service. The Aeronautical Information Service provider shall include the provider, the data source and means of receipt, display and integrity of the following information :

(*a*) WGS-84 survey co-ordinates ;

(*b*) Aeronautical Meteorology information ;

(*c*) Information on aerodrome conditions and the operational status of facilities and navigation aids ;

(*d*) Aerodrome works and administration ;

(3) The Aeronautical Information Service provider should include procedures to ensure that it can, and will continue to be able to provide reliable information in relation to its Aeronautical Information Services to other organisations whose functions reasonably require that information (e.g. ATS units and centres).

(4) Data recipients may include :

(*a*) ATS providers ;

(*b*) Briefing offices ;

(*c*) Airline offices ;

(*d*) Pilots ;

(*e*) Other AIS providers ;

(*f*) Military ;

(*g*) The Aeronautical Telecommunications provider ; and

(*h*) Other Government agencies.

Aeronautical Charts

Provision of Aeronautical Charts.

IS14.5.2.1.—(*i*) The Aeronautical Charts Provider shall provide Aeronautical Charts in accordance with these Regulations and Aeronautical Charts Manual of Standards.

(*ii*) An Aeronautical Charts Provider shall ensure that any aeronautical chart that it provides is in accordance with its Manual of Operations.

(*iii*) On application for issue and renewal to operate as an Aeronautical Charts Provider, the applicant shall provide sufficient information to the Authority to enable it to assess the suitability of the applicant.

Application for an Aeronautical Charts Provider Certificate.

IS14.5.3.2. The Authority should ensure that the information required are included in the applicant's Manual of Operations.

The following is a guideline to ensure that applicants include the information required :—

(*i*) an applicant for an approval shall provide the Authority with a Manual of Operation containing :

(*a*) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*b*) the Manual of Operation defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulation; and Manual of Standards, Manual of Operations and appropriate operational documentation, shall be complied with by the organisation's personnel at all times ; and

(*c*) the titles and names of the senior person or persons ; and

(*d*) the duties and responsibilities of the senior person or persons in (*c*) including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation ;

(*e*) an organisation chart showing lines of responsibility of the senior persons in paragraph (*i*)(*b*) and (*e*) a summary of the organisation's staffing structure at each location listed under paragraph (*i*)(*g*) ; and

(*f*) a list of each type of aeronautical Charts to be produced by the organisation ; and

(*g*) a summary of the scope of activities at each location where the organisation's personnel are based for the purpose of providing or maintaining the types of services listed under paragraph (*i*)(*f*) ; and

(*h*) procedures and a plan to undertake adequate training of staff in the positions for which they will provide a service ;

(*i*) a contingency plan for implementation in the event of a disruption to services provided ; and (*j*) a security programme that details protection for facilities and services ; and

(*k*) personnel requirements and the responsibilities of personnel ;

(*l*) quality assurance/safety management system ;

(*m*) contingency plans developed for part or total system failure for which the organisation provides a service ;

(*n*) security plan ;

(*o*) any other information requested by the Authority.

(*ii*) The Authority may not grant an approval unless it is satisfied that the applicant's Manual of Operation complies with this implementing standard.

Personnel requirement and Responsibility of an Aeronautical Charts Provider.

IS 14.5.3.4.—(*i*) The approval holder shall ensure that there are sufficient personnel to collect, collate, check, co-ordinate, edit, draw/draft and amend an aeronautical charts design and production for the flight operations ;

(*ii*) Provide those authorized personnel with written evidence of the scope of their authorization and as well establish a procedure to maintain the competence of those authorized personnel ;

(*iii*) The certificate holder shall establish a procedure to initially assess the competence of those personnel authorized by the applicant to check, edit, and amend aeronautical charts for the flight operations procedures listed in their Manual of Operation ;

(*iv*) current unit organisational chart and written delegated responsibilities and position descriptions ;

(*v*) staffing-levels for operational positions ;

(*vi*) designated supervisor and their qualifications ;

(*vii*) staffing numbers and qualifications at unit level ;

(*viii*) An Aeronautical Charts Provider shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the aeronautical Charts covered by its certificate ;

(*ix*) An Aeronautical Charts Provider shall have, at all times, enough suitably qualified and trained personnel to enable it provide, in accordance with the standards set out in the Regulations, the aeronautical Charts covered by its certificate ;

(*x*) The Aeronautical Charts Provider shall ensure that its personnel are of sufficient numbers and experience and have been given appropriate authority to discharge their allocated responsibilities.

(*xi*) The Aeronautical Charts Provider will advise the minimum qualifications required for aeronautical Charts personnel operating positions ;

(*xii*) An Aeronautical Charts Provider shall arrange the work flow schedule of aeronautical Charts officers to provide duty rest periods ;

(*xiii*) A person shall not perform the duties of an aeronautical Charts officer when under the influence of alcohol or drugs.

Training of staff of an Aeronautical Charts Provider.

IS 14.5.3.5. The personnel involved in the charts production shall undergo the following courses :

(1) Basic Aeronautical cartography

(2) Conventional Aeronautical cartography.

(3) Digital Aeronautical cartography.

(4) Geographic Information System (GIS).

(5) Procedure design for Air Navigation.

(6) Refreshers course.

(7) Other relevant courses

Quality System for an Aeronautical Charts Provider.

IS 14.5.5. The aeronautical charts producer shall establish, implement, maintain, and adhere to a safety and quality assurance management system that is appropriate to the size, nature, and complexity of all activities authorized

(2) The quality system shall be documented in the service providers' Manual of Operations.

(3) The results of this system and related audits and corrective actions shall be made available to the Authority.

(4) If the holder of an Aeronautical Charts Provider Approval certificate makes any change in the quality system referred to in this section, which is significant to the showing of compliance with the appropriate requirements prescribed in this Part, the holder shall notify the Authority.

(5) A safety assessment shall be undertaken for any safety related change in (4) for assessment ; the applicant shall include information on the procedure for monitoring the quality of all Aeronautical data and aeronautical charts.

IS 14.5.15.—(1). The Aeronautical Charts service providers should ensure that the following are available for his operations :

Facilities and Equipment and Maintenance of Aeronautical charts

(*a*) Condusive workspace ;

(*b*) Equipment, hardware and software ; and

(*c*) Supporting services.

(*d*) Adequate revision of charts are carried out when there are new or changes in safety related structures.

IS 14.5.25.1.—(*a*) The total phase of flight can be sequenced into the following phases :

Operational Requirements and General Specifications for Charts.

(1) Phase 1-Taxi from aircraft stand to take-off point.

(2) Phase 2-Take-off and Note -The total flight is divided into the following phases : Climb to en-route ATS route structure.

(3) Phase 3-En route ATS route structure.

(4) Phase 4-Descent to approach.

(5) Phase 5-Approach to land and missed approach.

(6) Phase 6-Landing and taxi to aircraft stand.

(*b*) Each type of chart shall provide information relevant to the function of the chart ;

(*c*) Each type of chart shall provide information appropriate to the phase of flight, to ensure the safe and expeditious operation of the aircraft ;

(*d*) The presentation of information shall be accurate, free from distortion and clutter, unambiguous, and be readable under all normal operating conditions ;

(*e*) Colors or tints and type size used shall be such that the chart can be easily read and interpreted by the pilot in varying conditions of natural and artificial light ;

(*f*) The information shall be in a form, which enables the pilot to acquire it in a reasonable time consistent with workload and operating conditions ;

(*g*) The presentation of information provided on each type of chart shall permit smooth transition from chart to chart as appropriate to the phase of flight ;

(*h*) The aeronautical charts producer shall make the charts to be True North oriented.

(*i*) The basic sheet size of the charts should be 210 x 297 mm (A4).

General Specifications and other Requirements..

IS14.5.25.5.—(*i*) *Titles*.

The title of a chart or chart series shall not include "ICAO" unless the chart conforms with all the requirements specified in this Part.

(*ii*) *Miscellaneous information*

The aeronautical charts producer shall :

(*a*) Make the marginal note layout in accordance with Appendix 1 of Aeronautical Chart MOS.

(*b*) Show the following information on the face of each chart unless otherwise stated in the specification of the chart concerned :

(1) Designation or title of the chart series ;

(2) Name and reference of the sheet ;

(3) On each margin an indication of the adjoining sheet.

(*c*) Provide a legend to the symbols and abbreviations used. The legend shall be on the face or reverse of each chart except that, where it is impracticable for reasons of space, a legend may be published separately.

(*d*) Show the name and adequate address of the producing agency in the margin of the chart.

(*iii*) *Symbols*

The aeronautical charts producer shall conform with the symbols used to those shown in *Appendix* 2. of Aeronautical charts MOS, except that where it is desired to show on an aeronautical chart special features or items of importance to civil aviation for which no ICAO symbol is at present provided, any appropriate symbol may be chosen for this purpose, provided that it does not cause confusion with any existing ICAO chart symbol or impair the legibility of the chart.

(*iv*) *Units of measurement*

The aeronautical charts producer shall :

(*a*) Derive distances as geodesic distances ;

(*b*) Express the distances in nautical miles ;

(*c*) Express altitudes, elevations and heights in feet ;

(*d*) Express linear dimensions on aerodromes and short distances in meters ;

(*e*) Specify the order of resolution of distances, dimensions, elevations and heights for a particular chart ;

(*f*) State the units of measurement used to express distances, altitudes, elevations and heights on the face of each chart ;

(*g*) Provide the conversion scales (kilometers/nautical miles, meters/ feet) on each chart on which distances, elevations or altitudes are shown. The conversion scales shall be placed on the face of each chart.

(*v*) *Scale and projection*

The aeronautical charts producer shall indicate :—

(*a*) The name and basic parameters and scale of the projection for charts of large areas.

(*b*) A linear scale only for charts of small areas.

(*vi*) *Date of validity of aeronautical information*

The aeronautical charts producer shall indicate clearly the date of validity of aeronautical information on the face of each chart.

(*vii*) *Spelling of geographical names*

The aeronautical charts producer shall :

(*a*) Use the symbols of the Roman alphabet for all writing.

(*b*) Accept the names of places and of geographical features in countries which officially use varieties of the Roman alphabet in their official spelling, including the accents and diacritical marks used in the respective alphabets.

(*viii*) *Abbreviations*

The aeronautical charts producer shall :

(*a*) Use abbreviations on aeronautical charts whenever they are appropriate.

(*b*) Where applicable, should select abbreviations from the Procedures for Air Navigation Services - ICAO Abbreviations and Codes (Doc 8400).

(*ix*) *Political boundaries*

The aeronautical charts producer shall :

(*a*) Show International boundaries but may be interrupted if data more important to the use of the chart would be obscured.

(*b*) Where the territory of more than one State appears on a chart, shall indicate the names identifying the countries.

(*x*) *Relief*

(*a*) Relief, where shown, the aeronautical charts producer shall portray in a manner that will satisfy the chart users' need for :

(1) Orientation and identification ;

(2) Safe terrain clearance ;

(3) Clarity of aeronautical information when shown ;

(4) Show the spot elevations for selected critical points.

(5) Shall follow the value of spot elevations of doubtful accuracy by the sign±.

(*xi*) *Prohibited, restricted and danger areas*

When prohibited, restricted or danger areas are shown, the aeronautical charts producer shall include the reference or other identification except that the nationality letters may be omitted.

(*xii*) *Air traffic services airspaces*

When ATS airspace is shown on a chart, the aeronautical charts producer shall indicate the class of airspace, the type, name or call sign, the vertical limits and the radio frequency(ies) to be used and the horizontal limits depicted.

(*xiii*) *Magnetic variation*

The aeronautical charts producer shall :

(1) Indicate the True North.

(2) Indicate the Magnetic variation

(3) Ensure that the magnetic variation values shown should be those for the year nearest to the date of publication that is divisible by 5. (eg. 2005,2010 etc) In exceptional cases where the current value would be more than one degree different, after applying the calculation for annual change, an interim date and value should be quoted.

(*xiv*) *Aeronautical data*

The aeronautical charts producer shall :

(*a*) ensure that established procedures exist in order that aeronautical data at any moment is traceable to its origin so to allow any data anomalies or errors, detected during the production/ maintenance phases or in the operational use, be corrected;

(*b*) Ensure that the order of chart resolution of aeronautical data be that as specified for a particular chart as contained in Aeronautical Charts MOS ;

(*c*) Ensure that integrity of aeronautical data is maintained throughout the data process ;

(*d*) Ensure that from Survey , data integrity level shall apply as classified in :—

(1) Critical data, integrity level 1 x 10-8 : there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe ;

(2) Essential data, integrity level 1 x 10-5 : there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe ; and

(3) Routine data, integrity level 1 x 10-3 : there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

(*e*) Aeronautical data quality requirements related to the integrity and data classification shall be as provided in Appendix 6 of Aeronautical Charts MOS. Protection of electronic aeronautical data while stored or in transit shall be totally monitored by the Cyclic Redundancy Check (CRC).

(*f*) To achieve protection of the integrity level of critical and essential aeronautical data, a 32 - or 24-bit CRC algorithm shall apply respectively.

(*g*) To achieve protection of the integrity level of routine aeronautical data, a 16-bit CRC algorithm or a WX system software or any equivalent system could be applied.

(*xv*) *World Geodetic System*-1984 (*WGS*-84)

The Aeronautical Charts service provider shall make use of the following :

(*a*) Horizontal reference system.

World Geodetic System - 1984 (WGS-84) shall be used as the horizontal (geodetic) reference system. Published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS- 84 geodetic reference datum.

(*b*) Geographical coordinates which have been transformed into WGS-84 coordinates but whose accuracy of original field work does not meet the requirements in Charts MOS 2.18.1.2 shall be identified by an asterisk.

(*c*) The order of chart resolution of geographical coordinates shall be that specified for a particular chart series and in accordance with Charts MOS *Appendix* 6, Table 1

(*d*) Vertical reference system shall be Mean sea level (MSL) datum, which gives the relationship of gravity-related height (elevation) to a surface known as the geoid, shall be used as the vertical reference system.

(*e*) In addition to the elevation (referenced to mean sea level) for the specific surveyed ground positions, publish geoids undulation (referenced to the WGS-84 ellipsoid) for those positions as specified for a particular chart ;

(*f*) Where the vertical reference system is ellipsoidal the geoidal undulation shall be determined or calculated based on EGM96 or better whichever model should be stated as necessary ;

(*g*) The order of chart resolution of elevation and geoid undulation shall be that specified for a particular chart series and in accordance with Appendix 6, Table 2 of Aeronautical Charts MOS ;

(*h*) Temporal reference system. The Gregorian calendar and Co-ordinated Universal Time (UTC) shall be used as the temporal reference system ;

(*i*) When a different temporal reference system is used for charting, this shall be indicated in GEN 2.1.2 of the Aeronautical Information Publication (AIP).

(*xvi*) *Obstacle Restriction and Removal*

Aeronautical charts Approval Holder shall determine the Obstacle limitation surfaces in accordance with requirement contained in Aerodrome Standard Manual chapter 8 (8.2.2).

(*xvii*) *Establishing Procedure Design unit*

The aeronautical Charts provider shall establish an appropriate Flight Procedure Design unit approved by the Authority to ensure that safety is maintained in the provision of ATS within its airspace and aerodromes.

(*xviii*) *Establishing VOR and NDB Routes*

The aeronautical Charts provider shall establish an appropriate VOR and NDB routes approved by the Authority to ensure that safety is maintained in the provision of ATS within its airspace and aerodromes.

AEROMET

Hazardous weather.

IS 14.6.2.1.—(*f*)—(*i*) Issue SIGMET information phenomena which may affect the safety of aircraft operations, and of the development of those phenomena in time and space within its area of responsibility to the ATS providers, AIS Unit and other meteorological watch offices for dissemination in accordance with the template shown in ICAO *Annex* 3 ;

(*ii*) SIGMET messages concerning volcanic ash cloud and tropical cyclones shall be based on advisory information provided by Volcanic Ash Advisory Centers and Tropical Cyclone Advisory Centers designated by regional air navigation agreement respectively ;

(*iii*) Issue wind shear warnings for aerodromes where wind shear is considered a factor ;

(*iv*) At aerodromes where wind shear is detected by automated ground-based, wind shear remote-sensing or detection equipment, wind shear alerts generated by these systems shall be issued ;

(*v*) Wind shear alerts shall give concise, up-to-date information related to the observed existence of wind shear involving a headwind/tailwind change of 7.5m/s (15 kt) or more which could adversely affect aircraft on the final approach path or initial take-off path and aircraft on the runway during the landing roll or take-off run ;

(*vi*) Issue aerodrome warnings and any other hazardous weather events on meteorological conditions which could adversely affect aircraft on the ground, including parked aircraft, and the aerodrome facilities and services.

Meteorological Information on wind.

IS 14.6.2.1.—(*n*)—(*i*) ensuring that wind sensors for local meteorological reports are appropriately sited to give the best practicable indication of conditions along the runway/touchdown zone ;

(*ii*) the provision in air traffic services units of wind displays related to the same integrated automatic systems as that of the aeronautical meteorological service provider ;

(*iii*) the calibration and maintenance of these wind displays/instruments ;

(*viii*) the use to be made of these wind displays/instruments by air traffic services personnel ;

(*iv*) the provision of supplementary visual observations for meteorological phenomena of operational significance in the climb-out and approach areas made by air traffic services personnel to update or supplement the information supplied by the meteorological observer ;

(*v*) action to be taken in respect of meteorological information obtained from aircraft taking off or landing ;

(*vi*) implementation of the required criteria/procedures regarding meteorological information/data for the establishment of aerodrome operating minima.

SIGMET and other Information.

IS14.6.3.1.—(1) SIGMET information shall be issued by ameteorological watch office and shall give a concise description in abbreviated plain language concerning the occurrence and/or expected occurrence of specified en-route weather phenomena, which may affect the safety of aircraft operations, and of the development of those phenomena in time and space.

(2) SIGMET messages shall be disseminated to other meteorological watch offices, WAFCs and to other meteorological offices in accordance with regional air navigation agreement. SIGMET messages for volcanic ash shall also be disseminated to VAACs.

(3) SIGMET messages shall be disseminated to international OPMET databanks and the centres designated by regional air navigation agreement for the operation of aeronautical fixed service satellite distribution systems, in accordance with regional air navigation agreement.

(4) SIGMET information shall be cancelled when the phenomena are no longer occurring or are no longer expected to occur in the area.

(5) The following standards shall be complied with in accordance with the Authority's Aeronautical Meteorological Manual of Standards.

(*i*) Period of validity of a SIGMET message ;

(*ii*) Period of validity of special case of SIGMET messages for volcanic ash cloud and tropical cyclones ;

(*iii*) Period within which SIGMET messages shall be issued before the commencement of the period of validity and period of up-dating SIGMET messages.

Quality Management System.

IS14.6.6.—(*b*)—(1) An aeronautical meteorological service provider shall implement a Quality Management System (QMS in line with ISO 9001) standards) which is aim to provide the user with assurance that the meteorological information supplied complies with the stated requirements in terms of the geographical and spatial coverage, format and content, time and frequency of issuance and period of validity, as well as the accuracy of measurement, observation and forecasts.

(2) The QMS documentation requirements shall include :

(*a*) documented statements of policy and objectives ;

(*b*) relevant procedures, processes and resources necessary to provide for the quality management of the meteorological information to be supplied to users ;

(*c*) verification and validation procedures and resources for monitoring adherence to standards ;

(*d*) document and records as needed to ensure effective planning, operation and control of processes.

(3) An aeronautical meteorological service provider shall determine, collect and analyse appropriate data to demonstrate the suitability and effectiveness of the QMS.

(4) An aeronautical meteorological service provider shall keep under review its QMS and take such corrective action as it is necessary to ensure continue improvement in the effectiveness of the QMS.

(5) The demonstration of compliance of the quality system applied shall be by internal and external audit.

(6) If nonconformity of the system is identified, action shall be initiated to determine and correct the cause.

(7) All audit observations shall be evidenced and properly documented.

AMSP Manual of Operations.

IS14.6.7.1.—(*a*) On application for or renewal to operate as an Aeronautical Meteorological service provider, the applicant shall provide sufficient information to the Nigerian Civil Aviation Authority so that the Authority can assess the suitability of the applicant.

(1) The NCAA has determined that the information required should be included in the applicant's Manual of Operations.

(2) To assist applicants the following is a guideline to ensure that applicants include information required.

(3) An applicant for an approval shall provide the Authority with a Manual of Operation containing :

(*a*) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*i*) the Manual of Operation defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulation ; and

(*ii*) the Manual of Operation and appropriate operational documentation, shall be complied with by the organisation's personnel at all times ; and

(*b*) the titles and names of the senior person or persons ; and

(*c*) the duties and responsibilities of the senior person or persons in paragraph (3)(*b*) including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation ; and

(*d*) an organisation chart showing lines of responsibility of the senior persons in paragraph (3)(*b*) and covering each location listed under paragraph 1(4)(*f*) ; and

(*e*) a summary of the organisation's staffing structure at each location listed under paragraph (3)(*f*) ; and (*f*) a list of the type of Aeronautical Meteorological Service to be provided under the authority of the Aeronautical Meteorological Service provider approval ; and

(*g*) a summary of the scope of activities at each location where the organisation's personnel are based for the purpose of providing or maintaining the types of services listed under paragraph (3)(*f*) ; and

(*h*) procedures and a plan to undertake checking and training of staff in the positions for which they will provide a service ;

(*i*) the detailed procedures required regarding internal quality assurance and safety management system ;

(*j*) a contingency plan for implementation in the event of a disruption to services provided ; and

(*k*) a security programme that details protection for facilities and services ; and

(*l*) a summary of the communication capability of each facility associated with each location listed under paragraph (3)(*g*) ; and

(*m*) procedures to control, amend, and distribute documentation and retain records.

(*n*) procedures for decommissioning of equipment or facilities.

(4) The Authority may not grant an approval unless the Authority is satisfied the applicant's Manual of Operation complies with this Part.

Personnel Requirements.

IS14.6.9.1.—(1) An applicant for the provision of Aeronautical Meteorological Service shall provide in its Operations Manual ;

(*a*) current unit organisational chart and written delegated responsibilities and position descriptions ;

(*b*) staffing-levels for operational positions ; and

(*c*) staffing numbers and qualifications of personnel at each office or station.

(2) An Aeronautical Meteorological Service provider shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the aviation meteorological services covered by its approval.

(3) An Aeronautical Meteorological Service provider shall have, at all times, sufficient suitably qualified and trained personnel to enable it provide, in accordance with the standards set out in the Regulations, the aviation meteorological services covered by its approval.

(4) The Aeronautical Meteorological Service provider shall ensure that its personnel are in sufficient numbers and experience and have been given the appropriate authority to be able to discharge their allocated responsibilities.

(5) The Aeronautical Meteorological Service provider shall ensure that the qualifications of personnel providing aviation meteorological services are in accordance with World Meteorological Organisation requirements.

(6) An Aeronautical Meteorological Service provider shall arrange the work flow schedule of aviation meteorological personnel to provide sufficient rest time. A sample of the Aviation Meteorological service providers roster is to be included in the Manual of Operations.

(7) The Aeronautical Meteorological Service provider shall engage, employ or contract :

(*a*) At each meteorological office a senior person to whom authority has been granted to ensure that all activities undertaken by the unit are carried out in accordance with the applicable requirements prescribed in this section, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements :

(*i*) unrestricted access to work performed or activities undertaken by all other persons as employees of, and other persons rendering service within the unit ;

(*ii*) full rights of consultation with any such person(s) in respect of such compliance by him or her ;

(*iii*) powers to order cessation of any activity where such compliance is not effected ;

(*iv*) a duty to establish liaison mechanisms with the Authority with a view to ascertain correct manners of compliance with the said requirements, and interpretations of such requirements by the Authority, and to facilitate liaison between the Authority and the unit concerned ;

(*v*) powers to report directly to the management of his or her organisation, on his or her investigations and consultations generally, and in cases contemplated in subparagraph (*iii*), and with regard to the results of the liaison contemplated in sub-paragraph (*iv*) ; and

(*vi*) Upon receipt of proficiency reports received from synoptic and forecast units, the responsible officer at the headquarters of the service provider shall undertake thorough evaluation with a view to correcting any deficiency revealed by the assessment report.

(*b*) At each meteorological office and station a person who is responsible for :

(*i*) quality control, and who shall have direct access to the person referred to in paragraph (7) a on matters affecting Aeronautical Meteorology ; and

(*ii*) preparation of proficiency reports on personnel within the stations for onward transmission to the management of the aviation meteorological service provider ;

(*c*) enough personnel to plan, provide and supervise the services listed in its approval as a service provider, in a safe and efficient manner.

Qualification and Training of personnel of an AMSP.

IS14.6.9.2.—(1) It is the responsibility of the meteorological service provider to establish and maintain proficiency standards in service provision.

(2) The Aeronautical Meteorological Service provider shall establish a procedure for initially assessing, and a procedure for maintaining, the competence of the personnel required to operate and maintain the unit concerned. This shall include copies of the relevant assessment forms.

(3) The training of aeronautical meteorological forecasters and observers shall be in compliance with the details set out in the Guidelines for the Education and Training of Personnel in Meteorology and Hydrology; Supplement No1-WMO-No. 258 (Training and Qualification Requirements for Aeronautical Meteorological Personnel).

(4) The Aeronautical Meteorological Service provider shall establish a training program for its technical staff and maintain proper accounts of the training undertaken for each staff member.

(5) An Aeronautical Meteorological Service provider shall ensure that practical training carried out by him or her or on his or her behalf complies with :

(*a*) the standards and requirements set out in the Manual of Standards ; and

(*b*) the provider's operations manual.

IS14.6.10.—(1) An application for the provision of Aeronautical Meteorology services shall include the agreement between the applicant and an Air Traffic Services provider for the provision of Meteorological services. This shall include :

Collaboration between Aeronautical Meteorological Service Provider and Agency providing Air Traffic Services.

(*a*) the provision in air traffic services units of displays related to integrated automatic systems ;

(*b*) the calibration and maintenance of these displays/instruments ;

(*c*) the use to be made of these displays/instruments by air traffic services personnel ;

(*d*) as and where necessary, supplementary visual observations (for example, of meteorological phenomena of operational significance in the climb-out and approach areas) if and when made by air traffic services personnel to update or supplement the information supplied by the meteorological station ;

(*e*) meteorological information obtained from aircraft taking off or landing (for example, on wind shear) ; and

(*f*) if available, meteorological information obtained from ground weather radar.

Safety Audit and Inspection.

IS14.6.12.—(*a*) Meteorological observation and forecasting. The following aspects shall be examined :

(1) Compliance with the Authority's Aeronautical Meteorological Services Manual of Standards to ensure that standard practices are maintained, that instruments and all their indicators are functioning correctly, and to check whether the exposure of the instruments has changed significantly ;

(2) Quality of information regarding the accuracy, integrity, completeness, timeliness and reliability of the information disseminated ;

(3) Training and competence checking ;

(4) Quality assurance regarding the necessary systems and processes put in place to support all aspects of meteorological services provision ;

(5) Contingency arrangements ; other causes may include civil unrests, industrial disputes, natural disasters, public health emergencies, military conflicts, or acts of unlawful interference with civil aviation ;

(6) Safety assessment of any safety-related change to the system being operated by the aeronautical meteorological services provider ;

(7) The dissemination of meteorological information between meteorological watch offices, aerodrome meteorological offices, air traffic services and other users of aeronautical meteorological services.

Approval of External Source (Contract) for AMSP

IS 14.6.31.1.—(*a*) To enable the approval of an external source, the holder of an Aeronautical Meteorological Services Provider certificate shall make available to the Authority, the following information :

(*i*) The function(s) to be contracted to the external source ;

(*ii*)The Agreement between the Aeronautical Meteorological Services Provider and contractor detailing how the contractor shall carry out the function(s) in accordance with the Aeronautical Meteorological Service Provider Manual of Operation ;

(*iii*) The cost recovery method ; and

(*iv*) The organisational chart, nominal roll and qualifications of personnel of the contractor ;

(*b*) The holder of an Aeronautical Meteorological Services Provider certificate shall verify, by test and/or inspection and maintain records that the function(s) has been performed satisfactorily by the contractor ;

(*c*) The holder of an Aeronautical Meteorological Services Provider certificate shall take the responsibility for the function(s) performed by the contractor.

AERONAUTICAL TELECOMMUNICATIONS SERVICES

Personnel Requirements and Responsibilities of Aerotel Service Provider.

IS 14.7.4. (*b*) (*i*)—(1) An applicant for the provision of Aeronautical Telecommunications Services shall provide in its Manual of Operations :

(*a*) current unit organizational chart and written delegated responsibilities and position descriptions ;

(*b*) staffing-levels for operational positions ;

(*c*) designated instructors and ratings and proficiency assessment officers ;

(*d*) staffing numbers and qualifications at unit level.

(2) An Aeronautical Telecommunications Services provider shall, at all times, maintain an appropriate organisation with a sound and effective management structure to enable it provide, in accordance with the standards set out in the Regulations, the Aeronautical Telecommunication Services covered by its Approval.

(3) An Aeronautical Telecommunications Services provider shall have, at all times, enough suitably qualified and trained personnel to enable it provide, in accordance with the standards set out in the Regulations, the aeronautical telecommunications services covered by its Approval.

(4) The Aeronautical Telecommunications Services provider shall ensure that its personnel are of sufficient numbers and experience and have been given appropriate authority to be able to discharge their allocated responsibilities.

(5) An Aeronautical Telecommunications Services provider shall arrange the work flow schedule of Aeronautical Telecommunications Services officers to provide duty rest periods. A copy of the Aeronautical Telecommunications Services providers fatigue management procedure is to be included in the Manual of Operations.

(6) An Aeronautical Telecommunications Services officer shall not exercise the privileges of his licence if he knows or suspects that he is suffering from or having regards to the circumstances of the period of duty to be undertaken is likely to suffer from such fatigue as may endanger the safety of any aircraft to which an aeronautical telecommunications control services is provided.

(7) A person shall not when exercising the privileges of an ATSEP licence be under the influence of alcohol or a drug to the extent as to impair his capacity to exercise such privileges.

(8) At the unit level the Aeronautical Telecommunications Services provider shall engage, employ or contract :

(*a*) a senior person to whom authority has been granted to ensure that all activities undertaken by the unit are carried out in accordance with the applicable requirements prescribed in this section, and who shall in addition be vested with the following powers and duties in respect of the compliance with such requirements.

(*i*) Unrestricted access to work performed or activities undertaken by all other persons as employees of, and other persons rendering services within the unit ;

(*ii*) full rights of consultation with any such person(s) in respect of such compliance by him or her ;

(*iii*) powers to order cessation of any activity where such compliance is not effected ;

(*iv*) a duty to establish liaison mechanisms with the Authority with a view to ascertain correct manners of compliance with the said requirements, and interpretations of such requirements by the Authority, and to facilitate liaison between the Authority and the unit concerned ; and

(*v*) powers to report directly to the management of his or her organisation, on his or her investigations and consultations generally, and in cases contemplated in subparagraph (*iii*), and with regard to the results of the liaison contemplated in sub-paragraph (*iv*) ;

(*b*) a person who is responsible for quality control, and who shall have direct access to the person referred to in paragraph (*a*) on matters affecting aviation safety ; and

(*c*) enough licensed personnel to plan, provide and supervise the services listed in its Approval as a services provider, in a safe and efficient manner.

Training and Checking of Aeronautical Telecommunications Personnel.

IS 14.7.4. (*b*) (*ii*)—(1) The Aeronautical Telecommunications Services provider shall establish a procedure for initially assessing, and a procedure for maintaining, the competence of the personnel required to operate and maintain the equipment concerned.

Granting of Ratings and Endorsements

(2) An endorsement certifies that an ATSEP licence holder is competent to maintain a particular aeronautical telecommunications facility at a particular aerodrome, or in relation to particular airspace.

(3) The Authority may designate the Aeronautical Telecommunications Services provider authority to grant an endorsement to a person who :

(*a*) Is a senior technician within the Aeronautical Telecommunications Services organisation ;

(*b*) Has held a rating for five year for the position in which an endorsement is being sought ;

(*c*) Has been approved by the Authority to act in this capacity.

(4) A person approved by the Authority may grant an endorsement to a person who :

(*a*) is eligible to be granted an ATSEP licence with a rating ; and

(*b*) successfully completes the training required by the Manual of Standards for the grant of the endorsement.

(5) An Aeronautical Telecommunications Services provider shall set up and maintain a program to ensure that its employees who hold ATSEP licences maintain endorsements appropriate to their duties.

(6) That program shall be in accordance with any standards and requirements set out in the manual of standards for aeronautical telecommunications.

(7) The provider shall include details of the program, including necessary training and tests of competency, in its Manual of Operations.

Periods of Validity of Ratings and Endorsement.

(8) Unless sooner cancelled, a rating on an ATSEP licence is valid for 36 months or until the licence is cancelled.

(9) Unless sooner cancelled, an endorsement on an ATSEP licence remains valid :

(*a*) for the period (no longer than 6 months) specified for an endorsement in the operations manual of the Aeronautical Telecommunications Services provider that granted it ; or

(*b*) if the licence is cancelled before that time ; or

(*c*) if the rating with which the endorsement is connected is cancelled before that time ; or

(*d*) until the licence holder ceases to be employed by that Aeronautical Telecommunications Services provider.

(10) For paragraph 3(9) (*c*), an endorsement is connected with a rating if the endorsement authorises the performance of the maintenance function of a facility for the holder of the rating.

(11) A rating or endorsement is not inforce :

(*a*) during any period of suspension ; or

(*b*) during any period of suspension of the relevant licence.

Proficiency

(12) As part of the quality system, the holder of an Aeronautical Telecommunication Services provider Approval shall assess the Aeronautical Telecommunications Services personnel in his or her employment.

(13) A formal proficiency assessment shall be carried out before a validation certificate or a rating validation can be issued to assess whether the applicant has achieved the required level of competence.

(14) At each facility the Aeronautical Telecommunications Services provider is to nominate a person to establish and maintain unit proficiency standards ; specific senior officers are to be appointed and tasked by the person responsible for the services as proficiency assessment officers for each discipline; at units where operational staff are multi-disciplined, the person responsible for the services shall appoint and task at least one proficiency assessment officer. Proficiency assessment officers may be appointed and tasked for each discipline although it is a multi-disciplined environment.

(15) At each major facility, the manager is to appoint and task an Aeronautical Telecommunications Services officer responsible for satellite units as the proficiency assessment officer.

(16) A person assessed as unsatisfactory may not be permitted to continue in the assessed discipline without supervision. If after a reasonable period a person is unable to pass the proficiency check, all details pertaining to the unsatisfactory assessment shall be assembled and sent to the Authority.

(17) Proficiency assessment officers shall prepare proficiency check rosters so that all operational staff are screened on a regular basis. Personnel shall be given advanced notice of a real time annual proficiency check so that adequate preparation, mentally and functionally, can be made.

(18) In addition, a formal assessment shall be carried out at least every 12 months to determine whether all operational personnel are maintaining the required level of competence in the positions for which a valid rating is held. Routine assessments should be conducted on an on-going basis during duty assignment.

(19) Personnel shall be assessed in key elements of the performance areas detailed on an assessment form.

(20) An assessment shall be made of both the quality of work and the level of knowledge of the elements assessed.

(21) The Manual of Operations shall also include the procedures for :

(*a*) Aeronautical Telecommunications Services personnel to undertake remedial training ; and

(*b*) updating Aeronautical Telecommunications Services personnel skills when introducing new equipment into services and updating communications.

(22) Proficiency and training records shall be maintained for all Aeronautical Telecommunications Services personnel.

Aeronautical Telecommunications Services provider's obligation to provide currency and recency training and assessment.

(23) An Aeronautical Telecommunications Services provider shall set up and maintain, in accordance with the Manual of Standards, programs for :

(*a*) continuing assessment of its employees' competency for the purposes of ensuring that they continue to satisfy the currency requirements in relation to ratings and endorsements ; and

(*b*) familiarisation, retraining and assessment of any of its employees who at any time do not satisfy the currency or recency requirement in relation to an endorsement.

(24) The provider shall include details of the program, including necessary training and tests of competency, in its operations manual.

Ancillary Qualifications.

(25) An ATSEP qualification certifies that the holder is competent to perform a particular ancillary function.

(26) The functions include the following :

(*a*) classroom instructor ;

(*b*) on-the-job instructor ;

(*c*) workplace assessor.

(27) Within the limits set out in the Manual of Standards, an Aeronautical Telecommunications Services provider may define, for the provider's organisation, the responsibilities of the holder of an ATSEP qualification mentioned in paragraph 3(26).

(28) Paragraph 3(26) does not prevent an Aeronautical Telecommunications Services provider defining an ancillary function for use within its own organisation.

(29) An Aeronautical Telecommunications Services provider shall set up and maintain a program to grant ATSEP qualifications to, and administer ATSEP qualifications held by, its employees.

(30) The provider shall include details of the program, including necessary training and tests of competency, in its operations manual.

(31) The program shall be in accordance with the standards and requirements set out in the Manual of Standards.

Conduct of Practical Training

(32) An Aeronautical Telecommunications Services provider shall ensure that practical training carried out by him or her or on his or her behalf, for the award of an ATSEP licence, rating, endorsement or ATSEP qualification, is carried out in accordance with :

(*a*) the standards and requirements set out in the Manual of Standards ; and

(*b*) the provider's Manual of Operations.

Safety Management System.

IS 14.7.4. (*b*) (*iii*)—(1) An Aeronautical Telecommunications Services provider shall have, and put into effect, a safety management system that includes the policies, procedures, and practices necessary to provide the Aeronautical Telecommunication Services covered by its Approval safely.

(2) The provider shall keep under review its safety management system and take such corrective action as is necessary to ensure that it operates properly.

Safety reviews shall be conducted on a regular basis by qualified personnel.

(3) A safety assessment shall be undertaken for any safety related change.

(4) For assessment, the applicant shall include information on the procedures for the :

(*a*) recording and investigation of incidents ;

(*b*) recording and investigation of accidents ;

(*c*) monitoring of equipment outages ;

(*d*) assessment of elements critical to the services provision ; and

(*e*) monitoring of Mean Time Between Failures (MTBF).

Contingency Plan of Aeronautical Telecommunications Service Provider.

IS 14.7.4. (*b*) (*iv*)—(1) An Aeronautical Telecommunications Services provider shall develop and maintain Contingency Plans for implementation in the event of disruption, or potential disruption, of Aeronautical Telecommunication Services and related supporting services for the facilities it maintains. The disruption may be caused intentionally (sabotage) or unintentionally (equipment failure).

(2) The plan shall include :

(*a*) the actions to be taken by the members of the provider's personnel responsible for providing the services ; and

(*b*) possible alternative arrangements for providing the services ; and

(*c*) the arrangements for resuming normal operations for the services.

(3) These plans shall be submitted as part of the Manual of Operations.

Security Plan of Aeronautical Telecommunications.

IS14.7.4. (*b*) (*v*) The applicant shall provide a plan that details what measures, both physical and procedural that they intend to protect facilities used for air navigation. This should include a security assessment of the facilities maintained by the applicant.

IS 14.7.4. (*b*) (*vi*) Mininimum equipment list for different types /category of airport shall include :

Minimum Air navigation facility equipment list for Aeronautical Telecommunication service Provider certificate holder.

INTERNATIONAL AIRPORTS :

1. Air Traffic Control

(*i*) Three (3) position control console with associated circuitry including ground movement control position.

(*ii*) Primary and Secondary frequencies for VHF communication (Air-ground communication) equipped with battery/UPS, at Tower/Approach/ Area control centres where applicable.

(*iii*) One (1) number HF communication set (ups/battery backup).

(*iv*) VHF (121.7MHz) communication equipped with battery/UPS for domestic operations.

(*v*) Integrated Voice communication recorder/playback system (dual installation with ups/battery of not less than 60 minutes autonomy),

(*vi*) ATIS information system.

(*vii*) PABX (Hotline) and intercom facilities at each ATC centre.

(*viii*) Three (3) VHF air-band (hand-held) radios.

(*ix*) Aerodrome rotating beacon.

(*x*) Remote Navaids monitor.

(*xi*) Air Field Lighting Control System (LICOS).

(*xii*) Signalling Lamp with required colour slides.

(*xiii*) Crash Alarm Bell.

2 . Rescue Coordination Centre :

(*i*) VHF hand-held Air-band radios with variable frequencies.

(*ii*) Satellite Telephone/GSM phones.

(*iii*) PABX (Hotline) and intercom facilities.

3. Communication Centre :

(*i*) Two (2) numbers- HF communication set (one to serve as redundancy with ups/battery backup).

(*ii*) AFTN/AMHS facility with adequate terminals.

4 Navigation equipment :

(*i*) VOR/DME co - located (dual installation).

(*ii*) Non Directional Beacon (NDB) /Locator Beacon (dual installation).

(*iii*) One (1) number ILS/DME (dual installation), (PAPI) (serving both ends of a runway for category II condition). Note: The provision of two (2) ILS/DME equipment serving one runway for opposite orientation is optional.

(*iv*) Remote Navaids monitor.

5. Surveillance equipment :

(*i*) Terminal Approach radar and allied accessories (PSR/SSR)—(dual installation)-optional.

(*ii*) GNSS capability based on WGS - 84 surveys.

6. Auxiliary Facilities :

(*i*) VHF (Hand-held) radios.

(*ii*) Effective cooling system.

7. Power requirement :

All equipment shal be connected to :—

(*i*) Primary and secondary power supplies.

(*ii*) UPS/Batteries.

(*iii*) Solar (optional).

DOMESTIC AIRPORT :

Minimum Communication and Navigational Aids requirement ;

1. Control Tower facility :

(*i*) Primary and Secondary frequencies for VHF communication (controller/pilot communication) equipped with battery/UPS, at the Control Tower.

(*ii*) VHF (121.7MHz) equipped with battery/UPS for domestic operations.

(*iii*) One (1) number HF communication set (ups/battery backup).

(*iv*) One (1) direct line, One (1) intercom with fax capability.

(*v*) Two (2) VHF (Hand-held) radios.

(*vi*) Integrated Voice communication recorder/playback system.

2. Communication centre :

(*i*) One (1) number HF transmitter/receiver (variable frequencies) with associated circuitry for AFTN.

3. Navigation and Landing equipment :

(*i*) VOR/ DME (co-located).

(*ii*) Non Directional Beacon (NDB) or Locator Beacon.

(*iii*) ILS and ILS/DME category.

(*iv*) Navaids monitor.

4. Auxiliary Facilities :

(*i*) Air band VHF (hand-held) Radios.

(*ii*) Effective cooling system.

5. Power requirement :

All equipment shall be connected to :—

(*i*) Primary and secondary power supplies.

(*ii*) UPS/Batteries (tertiary).

AIRSTRIP (critical for Dornier 228).

Minimum Communication and Navigational Aids requirement ;

1. Control Tower facility :

(*i*) Primary and Secondary frequencies for VHF communication (controller/pilot communication) equipped with battery/UPS.

(*ii*) VHF (121.7MHz) equipped with battery/UPS for domestic operations.

(*iii*) Two (1) number HF communication set.

(*iv*) Integrated Voice communication recorder/playback system.

(*v*) One (1) direct telephone line or equipment.

(*vi*) Intercom with fax capability.

(*vii*) Two (2) VHF (hand-held) Air band Radios.

2. Navigation equipment :

(*i*) Non Directional Beacon or Locator Beacon (dual installation).

3. Auxiliary Facilities.

(*i*) VHF (hand-held) Air band Radios.

(*ii*) Effective cooling systems.

4. Power requirement :

All equipment must be connected to :—

(*i*) Primary and secondary power supply

(*ii*) UPS/Batteries

CONTIGENCY PLAN FOR COMMUNICATION, NAVIGATION AIDS AND SURVELLANCE FACILITIES - POWER AND REDUNDANCY

Contingency plan shall be drawn for CNS facilities to establish continuity of service in both domestic and International Airports.

Standard Operating Procedure Manual (SOP).

IS 14.7.4. (*i*)—(1) The holder of an Aeronautical Telecommunication Services provider certificate shall provide each Aeronautical Telecommunication Services unit listed in its Manual of Operations, a local Aeronautical Telecommunications instructions manual which sets out the procedures for the operation of the Aeronautical Telecommunication Services unit concerned.

(2) The local Aeronautical Telecommunications Instructions Manual shall not be seen in isolation but rather as the document necessary to provide the interface between peculiarities of a particular unit and the various source documents, and does not relieve Aeronautical Telecommunication Services personnel from the responsibility of being familiar with and the application of procedures laid down in the following documents :

(*a*) Aeronautical Information Publication, AIP supplements, AIC and NOTAM ;

(*b*) Nigerian Aviation Act, 2006 ;

(*c*) Nigeria Civil Aviation Regulations ;

(*d*) Manual of Standards approved, authorised, published and amended by the Authority ; and

(*e*) Relevant documents, manuals and annexes published by ICAO.

CONTENTS OF STANDARD OPERATION PROCEDURE MANUAL

(3) Standard Operation Procedure Manual shall contain the following :

(*a*) detailed unit operational procedures and requirements ;

(*b*) detailed unit administrative requirements, including the responsibilities of each operating position ;

(*c*) amplification and/or explanation of provisions of the national requirements, where necessary ;

(*d*) coordination procedures between internal and external agencies (and when this is to occur-(change in status of facilities or navigation aids) ;

(*e*) contingency arrangements in the event of a communications, navigation aids, facility failure (including runway/taxiway closure) ;

(*f*) letters of Agreement with other agencies adjacent to the unit for the transfer of responsibility of control.

External Data Sources

(4) An Aeronautical Telecommunication Services provider shall consider the availability and reliability of external data sources required to provide an Aeronautical Telecommunication Services. The Aeronautical Telecommunication Services provider shall include the provider, the data source and means of receipt, display and integrity of the following information :

(*a*) AIS ;

(*b*) AFTN ;

(*c*) Flight testing ;

(*d*) Meteorological information ;

(*e*) Meteorological warnings ;

(*f*) Voice coordination with ATS providers ;

(*g*) Information on Aerodrome conditions and the operational status of facilities and navigation aids ; and

(*h*) Aerodrome works and administration coordination.

Output Data

(5) The Aeronautical Telecommunications Services provider should provide a description of the arrangements made or proposed to be made by the applicant to ensure that it can, and will continue to be able to provide the information in relation to its Aeronautical Telecommunications Services to other organisations whose functions reasonably require that information (e.g. ATS units and centres, Aerodrome Operators).

(6) Data recipients may include :

(*a*) AIS ;

(*b*) ATS providers ;

(*c*) Aerodrome administration ;

(*d*) ARFFS ;

(*e*) Aeronautical Meteorology services provider ; (f) Military ; and

(*g*) Other Government Agencies.

Amendments

(7) Amendments to the SOP should be recorded in the document itself and brought to the attention of all concerned.

(8) Aeronautical Telecommunications officers are required to indicate, in the appropriate manner, that an amendment has been noted.

(9) Any amendments by hand shall be accompanied by the authorised person's signature and date.

(10) Authorized person means any Aeronautical Telecommunications officer authorised by his or her manager to make the relevant amendment by hand. Notice of these amendments shall be transmitted to the head office responsible for the relevant services for ratification.

(*a*) Military ;

(*b*) The Aeronautical Telecommunications Provider ; and

(*c*) Other Government Agencies.

Application for Approval, Amendment or renewal as an Aeronautical Telecomm-unications Service Provider.

IS 14.7.10.1.—(1) On application for, and renewal to operate as an Aeronautical Telecommunications Services provider, the applicant shall submit sufficient information to the Nigerian Civil Aviation Authority so that the Authority can assess the suitability of the applicant.

(2) The NCAA has determined that the information required should be included in the applicant's Manual of Operations.

(3) To assist applicants the following is a guideline to ensure that applicants include the information required.

(4) An applicant for an Approval shall provide the Authority with a Manual of Operations containing :

(*a*) a statement signed by the accountable officer, on behalf of the applicant's organisation confirming that :

(*i*) the Manual of Operations defines the organisation and demonstrates its means and methods for ensuring ongoing compliance with the Regulation ; and

(*ii*) the Manual of Operations and Manual of Standards and appropriate operational documentation, shall be complied with by the organization's personnel at all times ; and

(*b*) the titles and names of the senior person or persons ; and

(*c*) the duties and responsibilities of the senior person or persons in paragraph including matters for which they have responsibility to deal directly with the Authority on behalf of the organisation ; and

(*d*) an organisation chart showing lines of responsibility of the senior persons in paragraph 1 (4), 1 (4) (*b*) and covering each location listed under paragraph 1(4),1(4) (*f*) ; and (*e*) a summary of the organization's staffing structure at each location listed under paragraph 1(4), 1(4)(*f*) ; and

(*f*) a list of each Aeronautical Telecommunications facility and associated equipment to be operated under the authority of the Aeronautical Telecommunications Services provider Approval ; and

(*g*) a summary of the scope of activities at each location where the organisation's personnel are based for the purpose of providing or maintaining the types of facilities listed under paragraph 1(4), 1(4)(*f*) ; and

(*h*) procedures and a plan to undertake checking and training of staff in the positions for which they will provide a services ;

(*i*) the detailed procedures required regarding internal quality assurance and safety management system ; and

(*j*) a contingency plan for implementation in the event of a disruption to services provided ;

(*k*) a security programme that details protection for facilities and services ; and

(*l*) procedures to control, amend and distribute documentation and retain records.

(5) The Authority may not grant an Approval unless the Authority is satisfied that the applicant's Manual of Operations complies with this Part.

(6) Where the Aeronautical Telecommunications services provider is proposing to use facilities owned by an aerodrome operator, such as on-rodrome navigation aids or facilities in a control tower owned by an aerodrome then the services provider shall demonstrate that there is an agreement with the owner such as memorandum of understanding.

The Authority to carry out an aeronautical telecommunications services function.

(7) A person may carry out an Aeronautical Telecommunications Services function in Nigeria if, at the time the person carried out the function :

(*a*) the Personnel holds an Air Traffic Safety Electronics Personnel (ATSEP) licence with a rating for the function and an endorsement for the equipment where, or, he or she carries it out ; and

(*b*) the licence, rating and endorsement are in force ; and

(*c*) he or she :

(*i*) Satisfies the recency and currency requirements in relation to the endorsement ; and

(*ii*) satisfies the currency requirement in relation to the rating.

(8) A person may carry out an Aeronautical Telecommunications Services functions in Nigeria under the supervision of a person who meets the requirements of paragraph 1 (6).

(9) A person who may carry out an Aeronautical Telecommunications Services function in Nigeria under supervision is a person who the Authority has authorised in writing to carry out the relevant services function and is ;

(*a*) a person who ;

(*i*) who holds an ATSEP licence with a rating for the function and an endorsement for the maintenance of equipment he or she carries out ; but at the relevant time, in relation to the rating or endorsement, does not satisfy the recency or currency requirement ;

(*b*) a person who :

(*i*) holds an ATSEP licence ; and

(*ii*) carries out the function in the course of training for a rating or endorsement (whether or not the person holds a rating or endorsement at the time) ;

(*c*) a person (other than a person who held an ATSEP that has been cancelled) who :

(*i*) has completed an approved course of training in the theory of Aeronautical Telecommunication Services ; and

(*ii*) carries out the function in the course of undergoing practical training for an ATSEP licence.

Rules applicable when a person performs an Aeronautical Telecommunications Services function under supervision

(10) If a person defined in paragraph 1(6) 1(8) (the trainee) is carrying out an Aeronautical Telecommunications Services function under supervision of a person who meets the requirement of section 1(6) (the supervisor) ; the trainee shall comply with the supervisor's directions.

(11) Any failure by the supervisor to supervise the trainee adequately is an offence, and shall be taken into account in considering whether the supervisor's ATSEP licence should be suspended or cancelled.

Carrying out Aeronautical Telecommunications Services Function without the Authority

(12) A person who is not authorised to do so by section 1(6) of 1(8) shall not carry out an Aeronautical Telecommunications Services function in Nigeria.

(13) A person to whom subsection 1(8) applies shall not carry out an Aeronautical Telecommunications Services function in Nigeria if the person is not acting under the supervision of a person who meets the requirements of section 1(6).

(14) It is a offence to a charge of contravening section 1(11) or 1(12) that the relevant action was, in the circumstances, reasonable in the interests of the safety of air navigation.

Provision of Aeronautical Telecommunications Services

(15) The Aeronautical Telecommunications Services provider shall provide Aeronautical Telecommunications Services in accordance with the Manual of Standards, approved, authorised, published and amended by the Authority.

(16) The Aeronautical Telecommunications Services provider may deviate from the standards if an emergency, or other circumstances, arises that makes the deviation necessary in the interest of safety.

(17) As soon as practicable, the provider shall report, the deviation to the Authority, stating how the deviation is expected to last.

(18) An Aeronautical Telecommunications Services provider shall ensure that the Aeronautical Telecommunications Services it provides are provided in accordance with the radiotelephony procedures and the procedures for Aeronautical Telecommunications set out in these Regulations.

(19) An Aeronautical Telecommunications Services provider shall ensure that any Aeronautical Telecommunications Services that it provides is provided in accordance with its Manual of Operations.

Application of Human Factors Principles

(20) The applicant shall demonstrate that human factors principles are considered when assessing the appropriateness of equipment, systems, software, facilities, procedures, jobs, environments, training, staffing, and personnel management to produce safe, comfortable and effective human performance.

Equipment Certification Procedure.

IS 14.7.30.1.(*i*) The Aeronautical telecommunication Service certificate holder shall comply with certification procedures including :

*Initial certification meeting.

*Permit Authority's inspector's visit to site (for site survey, site proving, an aerial survey and Environmental Impact Assessment (EIA).

*Factory Acceptance test (Joint NCCA/owner/consultant).

*Installation.

*Frequency Assignment/Identification codes.

*On site verification (NCAA to establish the relevant area of compliance).

*M.O.U with service provider or technical agreement with designated service provider.

*Personnel Requirement; Licensed officers /trained officers.

*Training Programmes/Manuals of Operation.

*Power supply requirement (Primary sources and secondary sources).

*Workshop (equipped with test equipments/tools).

*Contingency Plans (power supply, spares, emergency conditions, security plan (fencing intruders) fire cover).

*Flight Testing/calibration.

*Commissioning.

*Certification Audit.

(*ii*) *Expression of Interest*.

The intending applicant for equipment certification shall express the intention to the Authority. This can be in telephone, writing, or visit to the Authority.

(*b*) A pre-application meeting will be arranged between the applicant and the Authority to discuss the application requirements and certification process.

(*c*) The Authority, after meeting with the proposed service provider, will issue FORM : AC - ANS (AET) 001.

(*iii*) *Certification Requirement.*

The application for equipment certification shall be prepared with form: AC - ANS (AET) 001, the form which contain under listed information and shall be submitted by Air Navigation Service Provider (ANSP) :

(*a*) Type of equipment (Communication, Navigation, Surveillance) e.t.c

(*b*) Name and address of the manufacturer.

(*c*) Purpose e.g. en-route, approach, landing e.t.c.

(d) Year of manufacture.

(*e*) Proposed location (geographical coordinates).

(*f*) Proposed transmission power (PEP) of the facility.

(*g*) Information concerning similar facilities in the vicinity including distances from/to the proposed location and also respective frequencies and transmission power.

(*h*) Justification for the need

(*i*) Name and address of the manufacturer including telephone numbers.

(*j*) Any additional information that could facilitate the certification process.

(*k*) Copy of receipt of payment of statutory fee. (All necessary charges are expected to be paid by a proposed operator as contained in the Civil Aviation Act 2006 before grant of certificate).

(*iv*) Manpower / Equipment and Technical Information.

The submission shall also include :

*Schematic diagram,

*Technical manuals,

*User's manuals

*Manufacturers maintenance programme and procedures.

*A list of test equipment required, the inspector (s) should able to identi fying the type and model.

*Proof of availability of spare parts for sustainable operation.

*List of licensed personnel trained on this equipment with training records (or training programme before and after installation of the equipment.

(*v*) *Application Conditions*—

(*i*) If the service Provider's submission is not complete or the quality is obviously unacceptable, it must be returned immediately with an explanation of the deficiencies before further review and evaluation is conducted.

(*ii*) When the results of the NCAA evaluation of the application are satisfactory activities continues.

(*vi*) *Equipment Manufacturer's Profile Assessment.*

NCAA shall ensure that the applicant is able to produce manufacturer's proof of evidence/ credentials e.g. ISO certification, ICAO Approval/National certification for the production of such aeronautical telecommunication equipment.

(*vi*) *Factory Acceptance Test*

Joint participatory Factory Assessment Test must be conducted by ANSP and NCAA inspector at factory of the equipment manufacturer, to confirm if the equipment meets specification/operational requirements listed in the technical manual. This will be initiated and facilitated by the service provider. The evidence must be included in the application.

(*vii*) *Air Navigation Service Provider clearance.*

In this section the applicant shall be cleared to go ahead and instruct the manufacturer for the shipment of the equipment. This will be done through a formal letter granting such clearance after the conduct of a satisfactory Factory Acceptance Test and copy of report submitted to NCAA has been examined. This will be done through a formal letter granting such clearance.

(*viii*) *Feasibility of Radio Frequency*

The Authority will examine the feasibility of the frequency for use by the service provider. If the frequency requested is not available an alternative frequency will be assigned.

(*ix*) *Site Acceptance Test*

Joint participatory Site Acceptance Test must be conducted by ANSP representatives and the Authority's inspectors at installation site of the equipment, to confirm that the installed equipment meets performance requirements. The evidence must be included in the application.

(*x*) *Demonstration*

Demonstration of the performance of the equipment shall be conducted to confirm if the operational parameters listed in the technical manual are correct.

(*a*) If the equipment is a navigational aid, or surveillance aid, successful flight testing is required prior to the granting of operational certification.

(*b*)Operational certification will be issued for navigation aids for a period of five years base on successful calibration results over that period in with NCAA Advisory circular on testing of radio Navigation aids.

(xi) *Grant of Operational Certificate*

On successful commissioning of the equipment and certification audit, NCAA will grant operational certification which will be based on successful commissioning and certification audit results Service providers are to apply every five years for re-certification.

Facilities, Equipment and Maintenance Tools.

IS 14.7.31.1.—(1) An Aeronautical Telecommunications Services provider shall, at all times, make available for the use by its personnel, the repair and equipment testing materials necessary for providing Aeronautical Telecommunications Services covered by its Approval.

(2) The Aeronautical Telecommunications Services provider shall include in their Manual of Operations a list of facilities, and the repair and equipment testing materials required to maintain the equipment within tolerance levels, that will be maintained by the Aeronautical Telecommunications Services pro

(3) The equipment shall meet with the requirements specified in ICAO *Annex* 10 and Nigerian CARs Part 14 section 7.

(4) All persons involved with the provision of maintenance shall be fully conversant with current ICAO standards and recommended practices, documents, instructions, directives and relevant information.

Authorized Personnel to Approve Return to Service.

IS. 14.7.26 .1.—(*a*) The management (Chief Executive Officer) of ANS provider shall approve the return to service of an Aeronautical Telecommunication facility.

(*b*) An ATSEP personnel licensed by the Authority may approve return to services, of an Aeronautical Telecommunications facility after performing maintenance as delegated by the Chief Executive Officer.

Existing Facilities

(6) The Aeronautical Telecommunications Services provider shall, for each location for which a service is provided, indicate from the list below a list of facilities and equipment. An indication shall be provided on the quality of the facilities and equipment.

(7) All equipment used in the provision of Aeronautical Telecommunications Services, including navigation and approach services shall perform and be maintained in accordance with the standards and recommended practices as contained in ICAO Annex 10, Volumes I, II, III, IV and V, as well as ICAO Document 8071.

GENERAL

Item

The means to monitor the emergency frequency 121.5 MHz independent of mains and standby radio equipment emergency lighting.

ILS NDB VOR VDF DVOR DME

Locator Beacon

RADAR

Satellite Communications VHF Communications UHF Communications

HF Communications

Hotline

GSM

Hand held receivers

Ground based monitoring system

Lightening protection

Fire alarm

A briefing room. Equipment repair space Technical equipment storage Toilet facilities Running water Entry control Any other items.

Procurement of Aeronautical Telecommunications and Radio Navigation Equipment/ General CNS Facilities

(8) Aeronautical Telecommunications Services providers shall :

(*a*) ensure to avoid the proliferation of equipment and systems ;

(*b*) ease systems maintenance and spares sourcing ;

(*c*) conduct quality assessment of equipment and systems prior to purchase ; and

(*d*) maintain uniform operational characteristics and standardization.

(9) The Aeronautical Telecommunications Services provider shall inform the NCAA by writing prior to the purchase of any Aeronautical Telecommunications facilities.

(10) The Authority's Inspector shall observe the installation and radiation tests of the facilities and commissioning tests before they are finally put into operation.

Flight Inspection and Calibration.

IS. 14.7.25. Flight Inspection and Calibration.

(11) Flight tests are required to inspect signals in space as received at the aircraft after being influenced by external factors such as site conditions, ground conductivity, terrain irregularities, metallic structures, propagation effects, etc.

(12) The Aeronautical Telecommunications Services provider shall ensure that flight testing is used for :

(*a*) site proving ;

(*b*) commissioning ;

(*c*) periodic inspections (these should occur at least once a year) ; and

(*d*) special inspections, for example after an aircraft accident.

Facility Operation and Maintenance Plan

(13) The Aeronautical Telecommunications Services provider shall provide :

(*a*) A description of the maintenance scheduling system ;

(*b*) The interval between scheduled maintenance and/or routine performance inspections and the basis of the establishment of that time interval ;

(*c*) The operation and maintenance instructions for each facility ;

(*d*) Details of planned facility flight inspections. This shall include details of the standards and procedures to be used for flight inspections, the scheduled time between flight inspections, and the identity of the flight inspection organisation that will be contracted to carry out the flight inspections ;

If repair work is to be undertaken by a third party organisation, then the identity of the repair organisation should be included.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 15—SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

Introduction

Part 15 incorporates the principles, Standard and Recommended Practices (SARPs) governing the safe transport of dangerous goods by air as contained in Annex 18 to the Chicago Convention and ICAO Technical Instructions for Safe Transport of Dangerous Goods by Air (Doc. 9284).

The Part sets out regulatory requirements for the safe transport of dangerous goods by air.

NIGERIA CIVIL AVIATION REGULATIONS

PART 15—SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

CARRIAGE OF DANGEROUS GOODS BY AIR ARRANGEMENT OF REGULATIONS

ARRANGEMENT OF CONTENT

Contents :

NIGERIA CIVIL AVIATION REGULATIONS

PART15—CARRIAGE OF DANGEROUS GOODS BY AIR

15.0. APPLICABILITY.

This Part prescribes the requirements for :

(*i*) the safe transport of dangerous goods for both domestic and inter national operations by AOC holders ; and

(*ii*) packaging, accepting, handling, storing, loading, processing of cargo, mail and baggage.

Definitions.

15.1.—(*a*) When the following terms are used in these Regulations,they have the following meanings :

(1) "*Approval*"-An authorization granted by an appropriate national authority for :

(*a*) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions (Doc. 9284) state that such goods may be carried with an approval ; or

(*b*) other purposes as provided for in the Technical Instructions (Doc. 9284).

(2) "*Cargo Aircraft*"—Any aircraft, other than a passenger aircraft, which is carrying goods or property.

(3) "*Consignment*"—One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address ;

(4) "*Crew member*"—A person assigned by an operator to duty on an aircraft during a flight duty period.

(5) "*Dangerous Goods*"—Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions (Doc. 9284) or which are classified according to those Instructions ;

(6) "*Dangerous Goods Accident*"—An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property or environmental damage ;

(7) "*Dangerous Goods Incident*"—An occurrence,other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the

packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants is also deemed to constitute a dangerous goods incident ;

(8) *"DangerousGoodsSecurity"*—means measures or precautions to be taken by operators, shippers and others involved in the transport of dangerous goods a board aircraft to minimize theft or misuse of dangerous goods that may endanger persons or property ;

(9) *"Dangerous Goods Security Exception"*—A provision in this Regulation which excludes a specific item of dangerous goods from the requirements normally applicable to that item ;

(10) *"Elevated Temperature Substance"*—A substance which is transported or offered for transport :

(*a*) in the liquid state at a temperature of 100^{o}c or above ;

(*b*) in the liquid state with a flash point above 60.5^{o}c and which is intentionally heated to a temperature above is flash point or in a solid state an data temperature of 240^{o}c or above ;

(11) *"Exemption"*—An authorization issued by an appropriate national authority providing relief from the provisions of this Regulation ;

(12) *"Flight crew member"*—A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

(13) *"Freight Forwarder"*—A personor organisation who offers the service of arranging the transport of cargo by air ;

(14) *"Freight Forwarder Incompatible"*—Describing dangerous goods which, if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance ;

(15) *"Operator"*—A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

(16) *"Overpack"*—An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage ;

(17) *"Package"*—The complete product of the packing operation consisting of the packaging and its contents prepared for transport ;

(18) *"Packaging"*—Receptacles and any other components or materials necessary for the receptacle to perform its containment function ;

(19) *"Passenger aircraft"*—An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.

(20) *"Pilot-in-command"*—The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

(21) *"Serious Injury"*—An injury which is sustained by a person in an accident and which :

(*a*) requires hospitalization for more than 48 hours, commencing with in seven days from the date the injury was received ; or

(*b*) results in a fracture of any bone (except simple fractures of fingers, toes or nose) ; or

(*c*) involves lacerations which cause severe haemorrhage, nerve, muscle or tend on damage ; or

(*d*) involves injury to any internal organ ; or

(*e*) involves second or third degree burns, or any burns affecting more than 5percent of the body surface ; or

(*f*) involves verified exposure to infectious substances or injurious radiation.

(22) *"Solid Desensitized"*—Explosives are explosive substances which are wetted with water or alcohols or are diluted with other substances to form a homogeneous solid mixture to suppress their explosive properties ;

(23) *"State of Destination"*—The State in the territory of which the consignment is finally to be unloaded from an aircraft.

(24) *"State of Origin"*—The State in the territory of which the consignment is first to be loaded on an aircraft.

(25) *"State of the Operator"*—The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

(26) *"Technical Instructions"*—The Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council.

(27) *"Underclared or Misdeclared Dangerous Goods"*—Dangerous goods discovered in cargo which are not accompanied by a dangerous goods transport document ;

(28) *"UN Number"*—The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals to identify an article or substance or a particular group of substances.

(29) *"Unit Load Device"*—Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

15.2. General Provisions.

15.2.1. The general provisions of these Regulations shall apply to-

(*a*) any aircraft used for the conveyance of dangerous goods ;

(*b*) any person who-

(*i*) offers dangerous goods for conveyance by air ;

(*ii*) conveys dangerous goods by air ; or

(*iii*) accepts dangerous goods conveyed by air ; and

(*c*) any passenger or flight crew member on board or to be taken on board an aircraft.

(*d*) all international operations of civil aircraft

15.2.2. These Regulations shall not apply in respect of :

(*a*) dangerous goods carried in an aircraft where such goods are intended.

(*i*) to provide medical aid to a patient during a flight ;

(*ii*) to provide veterinary aid or a humane killer for an animal during a flight ;

(*iii*) for spraying, dusting or dropping in connection with agricultural, horticultural, forestry or pollution control operations ; or

(*iv*) for purposes of game and livestock management during a flight ;

(*b*) articles and substances which would other wise constitute dangerous goods but which are required to be on board the aircraft in accordance with the appropriate airworthiness requirements and the provisions of the operations manual concerned provided the articles and substances intended as replacements for such articles and substances, shall be conveyed in accordance with the requirements and standards prescribed in ICAO Doc. 9284- Dangerous Goods Manual.

(*c*) articles and substances which would other wise constitute dangerous goods but which are on board the aircraft for the specialised purposes as prescribed in ICAO Doc. 9284 ; and

(*d*) articles and substances intended for the personal use of passengers and flight crew members to the extent as prescribed in ICAO Doc. 9284.

15.2.3. The operator of an aircraft shall comply with the provisions contained in the ICAO Technical Instructions for the Safe Transport of Dangerous Goods By Air, ICAO Doc. 9284 on all occasions when dangerous goods are carried, and also take the necessary measures to achieve compliance with any amendment to the Technical Instructions which may be published during the specified period of applicability of an edition of the Technical Instructions.

15.3. Conveyance of Dangerous Goods forbidden.

No person shall offer, convey or accept in an aircraft :

(*a*) the dangerous goods specifically identified by name or by generic description in ICAO Doc. 9284 and these Regulations, as being forbidden for conveyance by air under any circumstances ;

(*b*) the dangerous goods identified in ICAO Doc. 9284 and these Regulations as being forbidden for conveyance by air under normal circumstances ;

(*c*) any other dangerous goods,unless in accordance with the provisions of the Civil Aviation Regulations and the requirements and standards prescribed in ICAO Doc. 9284 and these Regulations ; and

(*d*) infected live animals.

15.4. Exemption.

15.4.1. The Authority may, upon application in writing by any person referred to in 15.2.1.(*b*) of these Regulations, exempt such person from the provisions of 15.3 of these Regulations, in the case of :

(*a*) extreme urgency ;

(*b*) other forms of conveyance being in appropriate ; or

(*c*) full compliance with the provisions of these Regulations being contrary to aviation safety.

15.4.2. The Authority may grant an exemption referred to in15.4.1, under such conditions and for such period which the Authority may determine, but only after the applicant has made every effort to achieve the overall level of safety required by the Civil Aviation Act, these Regulations and ICAO Doc. 9284.

The exemption process shall be in accordance with Part 1.4 of these Regulations.

15.4.3. Where specifically provided for in the Technical Instructions, the Authority may grant an approval provided that in such instances an overall level of safety provided for in the Technical Instructions is achieved.

15.5. Classification, Division and listing of Dangerous Goods.

The classes, divisions and listing of dangerous goods shall be as prescribed in these Regulations and ICAO Doc. 9284.

15.6. National Authority

TheAuthority is the designated body in Nigeria responsible for ensuring compliance with this Part.

15.7. Designation of dangerous Goods Inspectors.

15.7.1. The Authority may designate dangerous goods inspectors to exercise the powers referred to in 15.8.

15.7.2. The conditions and requirements for the designation referred to in 15.7.1, shall be as prescribed in ICAO Doc. 9284 and these Regulations.-IS 15.7.2 to be developed by AvSEC and DOT.

15.7.3. The Authority shall sign and issue to each designated dangerous goods Inspect or a document which shall state the full name of such inspector and contain a statement indicating that :

(*a*) such inspector has been designated in accordance with 15.7.1. ; and

(*b*) such inspectoris authorised to exercise the powers referred to in 5.8.

15.8. Powers of Designated Dangerous Goods Inspector

15.8.1. A designated dangerous goods Inspector may :

(*a*) enter and inspect any :

(*i*) aerodrome or hangar ;

(*ii*) premises where goods intended for conveyance by air are made, produced, manufactured, where goods or baggage intended for conveyance by air a repacked, held or received or where goods or baggage are received after being conveyed by air ; and

(*iii*) aircraft, vehicle, freight container or unit load device used for the conveyance of dangerous goods, in order to ensure compliance with the provisions of the Civil Aviation Act and these Regulations ; and

(*b*) request any person to produce or furnish him or her with all documents and information relating to dangerous goods or baggage in so far as this may be necessary for the proper execution of his or her functions.

15.8.2. A designated dangerous goods Inspector who on reasonable grounds suspects that any baggage, consignment, freight container or unit load device contains goods which may not, interms of the provisions of the Civil Aviation Act and these Regulations, be conveyed by air, or goods which constitute a danger or potential danger to persons, aircraft or any other property, may inspect such baggage, consignment, freight container or unit load device and, if he or she deems it necessary in the interest of aviation safety, order that such goods be detained and not be loaded in an aircraft.

15.8.3. A designated dangerous goods inspector may at any time :

(*a*) search :

(*i*) any baggage, consignment, freight container or unit load device presented or accepted for conveyance by air ;

(*ii*) any baggage, consignment, freight container or unit load device received after being conveyed by air ; and

(*iii*) any person who has disembarked from an aircraft or who intends to board an aircraft, or the baggage or personal possessions of such person, in order to as certain whether dangerous goods have been or are to be conveyed by air, and a search referred to in sub-paragraph (i) shall be conducted with strict regard to decency and order and a person shall be searched only by a person of the same gender ;

(*b*) satisfy himself or herself that the mass, quantity or composition of any :

(*i*) goods or baggage offered or presented for conveyance in any consignment ;

(*ii*) passengers' baggage ;

(*iii*) freight container or unit load device ;

(*iv*) stores conveyed by the owner of an aircraft, or his or her agent ; and

(*v*) goods or baggage on board an aircraft, comply with the requirements and standards as prescribed in ICAO Doc. 9284 ;

(*c*) satisfy himself or herself that the requirements and standards as prescribed in these Regulations are complied with regarding the separation of the classes of dangerous goods in storage are as,unit load devices,vehicles and aircraft ;

(*d*) require goods to be removed from an aircraft if the requirements and standards referred to in paragraphs (*b*) and (*c*) are not complied with ;

(*e*) request any person to produce or cause to be produced for inspection any document relating to a consignment intended for conveyance by air or which has been conveyed by air, or any other document specified in ICAO Doc. 9284 ;

(*f*) question any person handling dangerous goods in order to ascertain whether that person complies with the provisions of the Civil Aviation Act and these Regulations and the requirements and standards as prescribed in ICAO Doc. 9284 relating to the handling of such dangerous goods ; and

(*g*) disallow the transport by air of any dangerous goods which, in his or her opinion, are not in a good condition, or the storage or use of which he or she determines to be dangerous.

15.9. TRAINING.

15.9.1. Any person(s), aircraft operator, agency and organization involved in the transport of dangerous goods by air shall establish, update and implement a training programmeas provided for in the Technical Instructions (Doc. 9284).

The Authority will notify ICAO of any variations (where applicable) for publication in the ICAO Technical Instructions (Doc. 9284).

15.9.2. The initial and recurrent dangerous goods training programme must be established and maintained by or on behalf of:

(*a*) Shipper of dangerous goods, including a packer and shipper's agent ;

(*b*) Aircraft operator ; or

(*c*) Person :

(*i*) who performs the act of accepting, handling, loading, unloading, transferring or other processing of cargo, on behalf of an aircraft operator ;

(*ii*) located at an aerodrome, who performs the act of processing passengers on behalf of an aircraft operator ;

(*iii*) not located at an aerodrome, who performs the act of checking in passengers on behalf of an aircraft operator ;

(*iv*) other than an aircraft operator, involved in processing cargo ; or

(*v*) engaged in the security screening of passengers and their baggage, shall ensure that the following categories of personnel in his or her employment, successfully complete initial dangerous goods training and refres her dangerous goods training :

(1) Cargo personnel ;

(2) personnel engaged in the ground handling, storage and loading of dangerous goods ;

(3) passenger handling personnel ;

(4) security personnel who deal with the screening of passengers and their baggage ;

(5) flight crew members ;

(6) packers ;

(7) shippers ; and

(8) shipper's agents.

15.9.3. Training as required by these Regulations shall only be provided by a dangerous good straining organisation approved by the Authority.

15.9.4. The subject matter of dangerous goods training and refres her programme shall be as prescribed in ICAO Doc. 9284.

15.9.5.Any person, employee or agency, referred to in 15.9.2. shall complete refres her dangerous goods training every 24months, calculated from the date of the successful completion of the initial dangerous goods training or the preceding refresher dangerous goods training, as the case may be.

15.9.6 Upon the successful completion of the initial dangerous goods training or the refresher dangerous goods training referred to in paragraph (3), the dangerous goods training organisation concerned shall issue to the candidate a certificate in the handling of dangerous goods to be conveyed by air.

15.10. VALIDATION OF FOREIGN CERTIFICATES.

15.10.1. The Authority may validate any foreign certificate issued in the handling of dangerous goods to be conveyed by air, if the holder of the certificate-

(*a*) has obtained such certificate from an approved foreign training organisation ; and

(*b*) has successfully completed the refresher dangerous goods training referred to in 15.9.4.

15.10.2. The provisions of 15.9.5. and 15.9.6. shall apply equally to the holder of a certificate referred to in 15.10.1.

15.11. Packing and Packaging.

15.11.1. A shipper shall ensure that all dangerous goods which the shipper prepares or offers for conveyance by air, are packed in accordance with the provisions of these Regulations and the requirements and standards as prescribed in ICAO Doc. 9284.

15.11.2. shipper shall ensure that any packaging used for the conveyance of dangerous goods by air shall :

(*a*) comply with the material and construction specifications of, and be tested initially in accordance with the requirements and standards as prescribed in ICAO Doc. 9284 ; and

(*b*) be of good quality and constructed and securely closed so as to prevent leakage caused by changes in temperature, humidity, pressure or vibration under normal conditions of conveyance by air.

15.11.3. A shipper shall ensure that inner packaging is packed, secured or cushioned to prevent its breakage or leakage and to control its movement within the outer packaging during normal conditions of conveyance by air.

15.11.4. A shipper shall ensure that packaging indirect contact with dangerous goods is resistant to any chemical or other action of such goods and cushioning, and that absorbent materials do not react dangerously with the contents of the receptacles.

15.11.5. A shipper shall ensure that packaging for which retention of a liquid is a basic function, is capable of with standing, without leaking, the pressure as prescribed in ICAO Doc. 9284.

15.11.6. No receptacle used for the conveyance of dangerous goods by air shall be re-used by the shipper until such receptacle has been inspected by such shipper and found free from corrosion or other damage.

15.11.7. If a receptacle, used for the conveyance of dangerous goods by air, is re-used by the shipper, all necessary measures shall be taken by the shipper to prevent contamination of subsequent dangerous goods conveyed there in.

15.11.8. If, because of the nature of their former contents, uncleaned empty receptacles may present a hazard, the shipper shall ensure that such receptacles are tightly closed and treated according to the hazard that they constitute.

15.11.9. A shipper shall ensure that no harmful quantity of any dangerous substance adhere to the outside of a package.

15.12. Responsibility of Shipper.

15.12.1. A shipper shall ensure that dangerous goods offered for conveyance by air, are not dangerous goods identified as prohibited from conveyance by air in line with 15.3. and are :

(*a*) identified, classified, packed, marked and labeled ; and

(*b*) accompanied by a properly executed dangerous goods transport document, in accordance with the provisions of these Regulations and the requirements and standards as prescribed in ICAO Doc. 9284.

15.12.2. A shipper shall ensure that any person employed by him or her or any person employed to act on his or her behalf, who is involved in the preparation of a consignment of dangerous goods to be conveyed by air, is trained in accordance with the provisions of 15.9.

15.13. LABELING AND MARKING.

15.13.1. Any person who offers any package containing dangerous goods for conveyance by air, shall ensure that such package is labeled with the appropriate label or labels in accordance with the requirements and standards as prescribed in ICAO Doc. 9284.

15.13.2. Any person who offers any package containing dangerous goods for conveyance by air, shall ensure that such package is marked with the proper shipping name, UN shipping number, class of hazard, subsidiary risk, packing group, packing instruction and any authorisation reference of the contents of the package in accordance with the requirements and standards as prescribed in ICAO Doc. 9284.

15.13.3. (*a*) Any person who offers any package containing dangerous goods for conveyance by air, shall ensure that each packaging which is manufactured in accordance with a packaging specification as prescribed in ICAO Doc. 9284, is marked with the appropriate packaging specification marking as prescribed in ICAO Doc. 9284.

(*b*) No packaging shall be marked with a packaging specification marking unless such packaging complies with the appropriate packaging specification as prescribed in ICAO Doc. 9284.

15.14. Dangerous Goods Transport Document.

15.14.1. Any person who offers dangerous goods for conveyance by air, shall, unless otherwise provided for in ICAO Doc. 9284, complete, sign, and provide the operator with a dangerous goods transport document and such other appropriate documents.

15.14.2. A dangerous goods transport document shall contain the information as prescribed in ICAO Doc. 9284 as well as a declaration, signed by the person referred to in paragraph (1), indicating that the dangerous goods offered for conveyance by air are :

(*a*) fully and accurately described by their proper shipping names ;

(*b*) identified, classified, packed, marked and labeled in accordance with the requirements and standards as prescribed in ICAO Doc. 9284 ;

(*c*) in proper condition for conveyance by air in accordance with the requirements and standards as prescribed in ICAO Doc. 9284 ; and

(*d*) not dangerous goods identified as prohibited from conveyance by air in line with 15.3.

15.15. Acceptance Procedures.

15.15.1. The operator of an aircraft in which dangerous goods are to be conveyed, shall not accept such dangerous goods for conveyance by air :

(*a*) unless the dangerous goods are accompanied by a completed dangerous goods transport document, except where ICAO Doc. 9284 provides that such document is not required ; and

(*b*) until such operator has inspected the exterior of the package, over pack or freight container containing the dangerous goods in accordance with the acceptance procedures as prescribed in ICAO Doc. 9284.

15.15.2. The operator referred to in paragraph (1) shall develop and use an acceptance checklist to ensure that the provisions of paragraph (1) regarding the acceptance of dangerous goods for conveyance by air are complied with.

15.15.3. The acceptance check list referred to in paragraph (2), shall comply with the requirements as prescribed in ICAO Doc. 9284.

15.16. Information to be provided.

15.16.1. The operator of an aircraft in which dangerous goods are to be conveyed shall provide the pilot-in-command, as soon as practicable before departure of the aircraft, with the written information as prescribed in ICAO Doc. 9284.

15.16.2. The operator of an aircraft shall provide information in its operations manual as will enable the flight crew to carry out its responsibilities with regards to dangerous goods transport and shall also provide instruction as to action to be taken in event of dangerous goods emergencies.

15.16.3.Operators, shippers or other organizations involved in the transport of dangerous goods by air shall provide information to their personnel as will enable them to carry out their responsiblities with regard to dangerous goods transport and shall also provide instruction as to action to be taken in event of dangerous goods emergencies.

15.16.4. In event of an in-flight emergency occuring, the pilot in Command shall, as soon as situation permits,inform the appropriate airtraffic unit, for the information of aerodrome authorities, of any dangerous goods on board the aircrafts, as provided for in the Technical Instructions (Doc. 9284).

15.16.5.In the event of aircraft accident or serious incident where dangerous goods carried as cargo are involved, the aircraft operator carrying dangerous goods as cargo shall provide information, without delay, to emergency services responding to the accident or serious incident about the dangerous goods on board, as shown on the written information to the pilot in command. The aircraft operator shall, as soon as possible, also provide information to the appropriate authorities of the state of operator and the state in which the dangerous goods accident or serious incident occured.

15.16.6. In the event of an aircraft incident, an aircraft operator carrying dangerous goods as cargo shall, if requested to do so, provide information without delay to emergency services responding to the incident and to the appropriate authority of the state in which the incident occured, as shown on the written information to the Pilot in Command.

15.16.7 Nigeria through its appropriate authority would consider participating in co-operative efforts with other states concerning violations of dangerous goods regulations with the aim of eliminating such violations through co-ordination of investigations and enforcement actions, joint inspections and other liaisons, exchange of technical staff, and joint meetings and conferences.

15.16.8. Security measures for dangerous goods, such as applicable to shippers, operators and other individuals engaged in the transport of dangerous goods by air to be taken to minimize theft or misuse of dangerous goods that may endanger persons, property or the environment shall be established and commmensurate with provisions in the Technical Instructions.

15.16.9. With the aim of preventing the recurrence of dangerous goods accidents and incidents, the Authority will establish procedures for investigating and compiling information concerning such accidents and incidents which occur in its territory and which involve the transport of dangerous goods originating or destined for another State. Reports on such accidents and incidents shall be made in accordance with detailed provisions of the Technical Instructions.

15.16.10. With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, the Authority will establish procedures for investigating and compiling information concerning such occurrences which occur in its territory and which involve the transport of dangerous goods originating in or destined for another State. Reports on such instances shall be made in accordance with the detailed provisions of the Technical Instructions.

15.17. Inspection fordamage or Leakage by Operator.

15.17.1. The operator of an aircraft in which dangerous goods are to be conveyed, shall inspect the exterior of each package and overpack containing dangerous goods and each freight container or package containing radioactive materials to ensure that there is no damage to or leakage from such package, overpack and freight container, before loading such package, overpack and container in the aircraft or into a unit load device.

15.17.2. The operator referred to in paragraph (1) shall inspect a unit load device before loading such device in the aircraft to ensure that there is no damage to or leakage from any dangerous goods contained there in.

15.17.3. No damaged or leaking package, overpack, freight container or unit load device shall be loaded in an aircraft.

15.17.4. If any package, overpack or freight container containing dangerous goods appears to be damaged or leaking after loading such package, overpack or freight container in an aircraft, the operator shall remove or arrange for the removal of such package, overpack or freight container from the aircraft and shall ensure that the remainder of the consignment is in a proper condition for conveyance by air and that no other package, overpack or freight container has been contaminated.

15.17.5. Each package or overpack containing dangerous goods,or a freight container or package containing radioactive materials, shall be inspected by the operator for signs of damage or leakage upon unloading such package, overpack or freight container from the aircraft or unit load device, and if damage or leakage has occurred, the area where such package, overpack, freight container or unit load device were stowed in the aircraft, shall be inspected for damage or contamination.

15.17.6. If a package, overpack or freight container containing radioactive materials is found to be damaged or leaking, the operator shall :

(*a*) take all necessary precautions to restrict access to such package, overpack or freight container containing radio-active materials ; and

(*b*) designate a qualified person to assess the extent of the contamination and the radiation level.

15.17.7. If any hazardous contamination is found in an aircraft as a result of damage to or leakage from a package or overpack containing dangerous goods, the operator shall de-contaminate the aircraft immediately.

15.17.8. The operator referred to in paragraph (1) shall remove an aircraft from service immediately when such aircraft is contaminated by radioactive materials and shall not return such aircraft to service until the radiation level resulting from the fixed contamination at any accessible surface and the non-fixed contamination, is below the values as prescribed in ICAO Doc. 9284.

15.17.9. Any person responsible for the conveyance or opening of packages containing infectious substances who become saw are of damage to or leakage from such packages, shall :

(*a*) avoid handling such infectious substances, where possible ;

(*b*) inspect adjacent packages for contamination ;

(*c*) inform the appropriate public health authority or veterinary authority of such damage or leakage ;

(*d*) provide the appropriate authority of the country of transit with information regarding any possible contamination ; and

(e) notify the shipper or the consignee accordingly.

15.18. STORAGE AND LOADING.

The operator of an aircraft in which dangerous goods are to be conveyed shall comply with the storage and loading provisions of these Regulations and the requirements and standards as prescribed in ICAO Doc. 9284.

15.19. LOADING RESTRICTIONS IN CABIN OR ON FLIGHT DECK.

Unless otherwise provided for in ICAO Doc. 9284, dangerous goods shall not be stowed in an aircraft cab in occupied by passengers or on the flight deck of an aircraft.

15.20. SEPARATION AND SEGREGATION.

15.20.1. The operator of an aircraft in which dangerous goods are to be conveyed and shall ensure that packages containing dangerous goods which might react dangerously when coming into contact with each other, are not stowed in an aircraft next to each other or in a position that would allow interaction between them in the event of leakage.

15.20.2. The operator referred to in paragraph (1) shall ensure that a package containing poison or an infectious substance is stowed in an aircraft in accordance with the requirements and standards as prescribed in ICAO Doc. 9284.

15.20.3. The operator referred to in paragraph (1) shall ensure that a package containing radioactive materials is stowed in an aircraft in a manner which separates the package from persons, live animals and undeveloped film, in accordance with the requirements and standards as prescribed in ICAO Doc. 9284.

15.21. Securing of Dangerous Goods.

15.21.1 The operator of an aircraft in which dangerous goods are to be conveyed, shall, when dangerous goods are loaded in the aircraft, protect such dangerous goods from being damaged, and shall secure such dangerous goods in the aircraft in a manner which will prevent any movement in flight that could change the orientation of the packages.

15.21.2. When securing packages containing radioactive materials, the operator shall ensure that the security is adequate in order that the requirements regarding the separation of radioactive materials referred to in 15.20.3 are complied with.

15.22. Loading in Cargo Aircraft.

Unless otherwise provided for in ICAO Doc. 9284, a package or overpack containing dangerous goods and bearing a "cargo aircraft only" label, shall be loaded in a manner that any flight crew member or other person authorised by the operator, can see, handle and, where size and weight permit, separate such package or overpack from other cargo in flight.

15.23. Dangerous goods accident and incident reporting.

15.23.1. The operator of an aircraft involved in a dangerous goods accident or Goods incident in Nigeria, shall immediately notify :

(*a*) in the case of an accident, any airtraffic service unit or the nearest police station ; or

(*b*) in the case of an incident, any airtraffic service unit, of such incident, and such air traffic service unit or police station, as the case may be, shall immediately on receipt of the notification, notify :

(*i*) the Authority ; and

(*ii*) where such accident or incident occurs at an aerodrome, the aero drome manager.

15.23.2. The operator of a Nigerian aircraft involved in a dangerous goods accident or dangerous goods incident outside the Country, shall, as soon as practicable, notify :

(*a*) the appropriate authority in the State or territory where the accident or incident has occurred, directly or through any airtraffic service unit ; and

(*b*) the Authority, of such accident or incident.

15.23.3. Any notification of a dangerous goods accident or dangerous goods incident referred to in 15.23.1. or 15.23.2. shall, in addition to the particulars of notification required under the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations contain the particulars as prescribed in ICAO Doc. 9284.

15.24. Dangerous Goods accident and incident investigation.

In Nigeria, Accident Investigation Bureau is the body responsible for the investigation of dangerous goods accidents and incidents of which the Authority and/or the Accident Investigation Bureau is notified in line with 15.23.1.

15.25. Dangerous Goods accident and incident information.

In the case of a consignment for which a dangerous goods transport document is required under these Regulations, the operator shall ensure that the information as prescribed in ICAO Doc. 9284 is available at all times for use in an emergency response to dangerous goods accidents or incidents.

15.26. Notification of undeclared or mis-declared dangerous goods.

The operator of an aircraft in which dangerous goods are conveyed within or outside Nigeria shall within 48hours after the discovery of :

(*a*) any undeclared or mis-declared dangerous goods ; or

(*b*) dangerous goods not permitted under 15.28. on board the aircraft or in the baggage of a passenger or flight crew member, notify the Authority or the appropriate thereof, as the case may be.

15.27. Retention of documents.

The operator of an aircraft in which dangerous goods are conveyed, shall ensure that at least one copy of all documents pertaining to a flight on which dangerous goods are conveyed, including the :

(*a*) dangerous goods transport document ;

(*b*) acceptance check list, if completion of the check list is required ; and

(*c*) written information provided to the pilot-in-command under 15.16.1., are retained for a period of 90days, calculated from the date of such flight.

15.28. Dangerous goods carried by passengers or Flight Crew members.

No passenger or flight crew member shall carry dangerous goods as, or in, carry-on baggage or checked baggage, or on his or her person, except in accordance with the requirements and standards as prescribed in Doc. ICAO 9284.

15.29. INFORMATION TO PASSENGER.

Any operator shall ensure that information regarding the types of goods that passengers are forbidden to carry on board an aircraft is available to such passengers and such information shall include :

(*a*) applicable information accompanying the passenger ticket ; and

(*b*) notices which are prominently displayed :

(*i*) at any location where tickets are issued and baggage checked ; and

(*ii*) in aircraft boarding are as and baggage claim are as.

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B 2

NIGERIA CIVIL AVIATION REGULATIONS

PART 16—ENVIRONMENTAL PROTECTION

INTRODUCTION

This Part presents standards and recommended practices as regulatory requirements for aircraft noise certification, vented fuel and aircraft engine emissions certification for aircraft engaged in international air navigation. Part 16 incorporates the ICAO Standard and Recommended Practices (SARPs) in Annex 16 Volume I and Volume II.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 16—ENVIRONMENTAL PROTECTION

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NIGERIA CIVIL AVIATION REGULATIONS

PART 16—ENVIRONMENTAL PROTECTION

16.1. NOISE CERTIFICATION

16.1.1.1.—This part is applicable to aircraft registered and operating in Nigeria and prescribes : Applicability.

(*a*) noise standards for the issue of noise certificate ;

(*b*) fuel venting standards for issue of fuel venting certificate ; and

(*c*) emission standards for the issue of emission certificate.

16.1.1.2.—(*a*) For the purpose of Part, the following definitions shall apply : Definitions.

(1) *Afterburning*. A mode of engine operation wherein a combustion system fed (in whole or part) by vitiated air is used.

(2) *Approach phase*. The operating phase defined by the time during which the engine is operated in the approach operating mode.

(3) *Associated aircraft systems*. Those aircraft systems drawing electrical/pneumatic power from an auxiliary power unit during ground operations.

(4) *Auxiliary power-unit* (*APU*). A self-contained power-unit on an aircraft providing electrical/pneumatic power to aircraft systems during ground operations.

(5) *Bypass ratio*. The ratio of the air mass flow through the bypass ducts of a gas turbine engine to the air mass flow through the combustion chambers calculated at maximum thrust when the engine is stationary in an international standard atmosphere at sea level.

(6) *Climb phase*. The operating phase defined by the time during which the engine is operated in the climb operating mode.

(7) *Date of manufacture*. The date of issue of the document attesting that the individual aircraft or engine as appropriate conforms to the requirements of the type or the date of an analogous document.

(8) *Derivative version*. An aircraft gas turbine engine of the same generic family as an originally type-certificated engine and having features which retain the basic core engine and combustor design of the original model and for which other factors, as judged by the certificating authority, have not changed.

(9) *Derived version of a helicopter*. A helicopter which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

NOTE 1.—In applying the Standards of this Annex, a helicopter that is based on an existing prototype but which is considered by the certificating authority to be a new type design for airworthiness purposes shall nevertheless be considered as a derived version if the noise source characteristics are judged by the certificating authority to be the same as the prototype.

NOTE 2.— "*Adversely*" refers to an increase of more than 0.30 EPNdB in any one of the noise certification levels for helicopters certificated according to subpart 16.8 and 0.30dB(A) in the certification level for helicopters certificated according to subpart 16.11.

(10) *Derived version of an aeroplane*. An aeroplane which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

NOTE 1.—Where the certificating authority finds that the proposed change in design, configuration, power or mass is so extensive that a substantially new investigation of compliance with the applicable airworthiness subparts is required, the aeroplane should be considered to be a new type design rather than a derived version.

NOTE 2.— "*Adversely*" refers to an increase of more than 0.10 dB in any one of the noise certification levels unless the cumulative effects of changes in type design are tracked by an approved procedure in which case "*adversely*" refers to a cumulative increase in the noise level in any one of the noise certification levels of more than 0.30 dB or the margin of compliance, whichever is smaller.

(11) *Exhaust nozzle*. In the exhaust emissions sampling of gas turbine engines where the jet effluxes are not mixed (as in some turbofan engines for example) the nozzle considered is that for the gas generator (core) flow only. Where, however, the jet efflux is mixed the nozzle considered is the total exit nozzle.

(12) *External equipment* (*helicopter*). Any instrument, mechanism, part, apparatus, appurtenance, or accessory that is attached to or extends from the helicopter exterior but is not used nor is intended to be used for operating or controlling a helicopter in flight and is not part of an airframe or engine.

(13) *Helicopter*. A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

(14) *Human performance*. Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

(15) *Oxides of nitrogen*. The sum of the amounts of the nitric oxide and nitrogen dioxide contained in a gas sample calculated as if the nitric oxide were in the form of nitrogen dioxide.

(16) *Rated thrust*. For engine emissions purposes, the maximum take-off thrust approved by the certificating authority for use under normal operating conditions at ISA sea level static conditions, and without the use of water injection. Thrust is expressed in kilonewtons.

(17) *Recertification*. Certification of an aircraft with or without a revision to its certification noise levels, to a Standard different to that to which it was originally certificated.

(18) *Reference pressure ratio*. The ratio of the mean total pressure at the last compressor discharge plane of the compressor to the mean total pressure at the compressor entry plane when the engine is developing take-off thrust rating in ISA sea level static conditions.

(19) *Self-sustaining powered sailplane*. A powered aeroplane with available engine power which allows it to maintain level flight but not to take off under its own power.

(20) *Smoke*. The carbonaceous materials in exhaust emissions which obscure the transmission of light.

(21) *Smoke Number*. The dimensionless term quantifying smoke emissions.

(22) *State of Design*. The State having jurisdiction over the organization responsible for the type design.

(23) *Subsonic aeroplane*. An aeroplane incapable of sustaining level flight at speeds exceeding flight Mach number of 1.

(24) *Take-off phase*. The operating phase defined by the time during which the engine is operated at the rated thrust.

(25) *Taxi/ground idle*. The operating phases involving taxi and idle between the initial starting of the propulsion engine(s) and the initiation of the take-off roll and between the time of runway turn-off and final shutdown of all propulsion engine(s).

(26) *Tilt-rotor*. A powered-lift capable of vertical take-off, vertical landing, and sustained low-speed flight, which depends principally on engine-driven rotors mounted on tiltable nacelles for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during high-speed flight.

(27) *Type Certificate*. A document issued by a Contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that State.

(28) *Unburned hydrocarbons*. The total of hydrocarbon compounds of all classes and molecular weights contained in a gas sample, calculated as if they were in the form of methane.

Symbols.

16.1.1.3. Where the following symbols are used in this Part, they have the meanings ascribed to them below :

CO	-	Carbon monoxide
Dp	-	The mass of any gaseous pollutant emitted during the reference emissions
	-	landing and take-off cycle
F_n	-	Thrust in International Standard Atmosphere (ISA), sea level conditions, for the given operating mode
F_{oo}	-	Rated thrust
F^*_{oo}	-	Rated thrust with afterburning applied
HC	-	Unburned hydrocarbons (see definition)
NO	-	Nitric oxide
NO_2	-	Nitrogen dioxide
NO_x	-	Oxides of nitrogen (see definition)
SN	-	Smoke Number (see definition)
^{TT}oo	-	Reference pressure ratio (see definition)

16.2. AIRCRAFT NOISE CERTIFICATION ADMINISTRATION

Applicability.

16.2.1.1.—(*a*) The provisions of 16.2.1.1(*b*) to 16.2.1.1(*f*) shall apply to all aircraft included in the classifications defined for noise certification purposes in 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, 16.10, 16.11 and 16.12 of this part where such aircraft are engaged in international air navigation.

(*b*) Noise certification shall be granted or validated by the Authority for an aircraft on the basis of satisfactory evidence that the aircraft complies with requirements that are at least equal to the applicable requirements specified in this Part.

(*c*) If noise recertification is requested, it shall be granted or validated by the Authority for an aircraft on the basis of satisfactory evidence that the aircraft complies with requirements that are at least equal to the applicable requirements specified in this Part. The date used by a certificating authority to determine the recertification basis shall be the date of acceptance of the first application for recertification.

(*d*) The noise certificate granted or validated by the Authority shall be carried on board the aircraft.

(*e*) The noise certificate for an aircraft shall contain at least the following information :

Item 1. Name of State.

Item 2. Title of the noise document.

Item 3. Number of the document.

Item 4. Nationality or common mark and registration marks.

Item 5. Manufacturer and manufacturer's designation of aircraft.

Item 6. Aircraft serial number.

Item 7. Engine manufacturer, type and model.

Item 8. Propeller type and model for propeller-driven aeroplanes.

Item 9. Maximum take-off mass in kilograms.

Item 10. Maximum landing mass, in kilograms, for certificates issued under Subparts 16.2, 16.3, 16.4, 16.5 and 16.12 of this Part.

Item 11. The subparts and section of this Part according to which the aircraft was certificated.

Item 12. Additional modifications incorporated for the purpose of compliance with the applicable noise certification requirements.

Item 13. The lateral/full-power noise level in the corresponding unit for documents issued under 16.2, 16.3, 16.4, 16.5 and 16.12 of this Part.

Item14. The approach noise level in the corresponding unit for documents issued under 16.2,16.3, 16.4, 16.5, 16.8 and 16.12 of this Part.

Item 15. The flyover noise level in the corresponding unit for documents issued under 16.2, 16.3, 16.4, 16.5 and 16.12 of this Part.

Item 16. The over flight noise level in the corresponding unit for documents issued under 16.6, 16.8 and 16.11 of this Part.

Item 17. The take-off noise level in the corresponding unit for documents issued under 16.8 and 16.10 of this Part.

Item 18. Statement of compliance, including a reference to Annex 16, Volume I.

Item 19. Date of issuance of the noise certification document.

Item 20. Signature of the officer issuing it.

(*f*) The items on the noise certificate shall be uniformly numbered in Arabic numerals as contained in 16.1.2(*e*) and IS16.1.2.5.

(*g*) The Authority will develop the procedures for the implementation of the noise certification documents.

(*h*) The Authority will recognize as valid a noise certification granted by the State of Registry provided that the requirements under which such certification was granted are at least equal to the applicable requirements specified in this Part.

(*i*) The Authority will suspend or revoke the noise certification of an aircraft registered in Nigeria if the aircraft ceases to comply with the applicable noise requirements. The Authority shall not remove the suspension of a noise certification or grant a new noise certification unless the aircraft is found, on reassessment, to comply with the applicable noise requirements.

(*j*) The amendment of this Part of the subparts to be used by the Authority shall be that which is applicable on the date of submission to that Authority :

(1) a Type Certificate in the case of a new type ; or

(2) approval of a change in type design in the case of a derived version ; or

(3) in either case, under an equivalent application procedure prescribed by Authority.

(*k*) Unless otherwise specified in this Part of the subparts, the date to be used by the Authority in determining the applicability of the requirements in this Part shall be the date the application for a Type Certificate was submitted to the State of Design, or the date of submission under an equivalent application procedure prescribed by the certificating authority of the State of Design.

(*l*) For derived versions where the provisions governing the applicability of the requirements of this Part refer to "the application for the certification of the change in type design", the date to be used by the Authority in determining the applicability of the requirements in this Part shall be the date the application for the change in type design was submitted to the Contracting State that first certified the change in type design, or the date of submission under an equivalent application procedure prescribed by the certificating authority of the Contracting State that first certified the change in type design.

(*m*) An application shall be effective for the period specified in the designation of the airworthiness subparts appropriate to the aircraft type, except in special cases where the certificating authority accepts an extension of this period. When this period of effectivity is exceeded, the date to be used in determining the applicability of the requirements in this Part shall be the date of issue of the Type Certificate or approval of the change in type design, or the date of issue of approval under an equivalent procedure prescribed by the State of Design, less the period of effectivity.

16.3. SUBSONIC JET AEROPLANES—Application for Type Certificate submitted before 6 October 1977.

16.3.1.1.—(*a*) The requirements of this subpart shall be applicable to all subsonic jet aeroplanes for which the application for a Type Certificate was submitted before 6 October 1977, except those aeroplanes : Applicability.

(1) requiring a runway length (with no stopway or clearway) of 610 m or less at maximum certificated mass for airworthiness ; or

(2) powered by engines with a bypass ratio of 2 or more and for which a certificate of airworthiness for the individual aeroplane was first issued before 1 March 1972 ; or

(3) powered by engines with a bypass ratio of less than 2 and for which the application for a Type Certificate was submitted before 1 January 1969, and for which a certificate of airworthiness for the individual aeroplane was first issued before 1 January 1976.

(*b*) The maximum noise levels of 16.3.1.4(*a*) shall apply except for derived versions for which the application for certification of the change in type design was submitted on or after 26 November 1981, in which case the maximum noise levels of 16.3.1.4(*b*) shall apply.

(*c*) Notwithstanding 16.3.1.1(*a*) and 16.3.1.1(*b*), the Authority will recognise that the following situations for jet aeroplanes and propeller-driven heavy aeroplanes on its registry do not require demonstration of compliance with the provisions of the requirements of this Part :

(1) gear down flight with one or more retractable landing gear down during the entire flight ;

(2) spare engine and nacelle carriage external to the skin of the aeroplane (and return of the pylon or other external mount) ; and

(3) time-limited engine and/or nacelle changes, where the change in type design specifies that the aeroplane may not be operated for a period of more than 90 days unless compliance with the provisions of this Part, is shown for that change in type design. This applies only to changes resulting from a required maintenance action.

16.3.1.2.—(*a*) The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 1 of ICAO Annex 16. Volume I Part II. Noise evaluation measure.

16.3.1.3.—(*a*) An aeroplane, when tested in accordance with the flight test procedures of 16.3.1.6, shall not exceed the noise levels specified in 16.3.1.4 at the following points : Noise measurement points.

(1) *lateral noise measurement point* : the point on a line parallel to and 650 m from the runway centre line, or extended runway centre line, where the noise level is a maximum during take-off ;

(2) *flyover noise measurement point* : the point on the extended centre line of the runway and at a distance of 6.5 km from the start of roll ; and

(3) *approach noise measurement point* : the point on the ground, on the extended centre line of the runway, 120 m (394 ft) vertically below the 3° descent path originating from a point 300 m beyond the threshold. On level ground this corresponds to a position 2 000 m from the threshold.

Maximum noise levels.

16.3.1.4.—(*a*) The maximum noise levels of those aeroplanes covered by 16.3.1.1(*a*) when determined in accordance with the noise evaluation method of Appendix 1 of ICAO Annex 16 Volume I Part II, shall not exceed the following :

(1) *at lateral and approach noise measurement points* : 108 EPNdB for aeroplanes with maximum certificated take-off mass of 272 000 kg or over, decreasing linearly with the logarithm of the mass at the rate of 2 EPNdB per halving of the mass down to 102 EPNdB at 34 000 kg, after which the limit remains constant ;

(2) *at flyover noise measurement point* : 108 EPNdB for aeroplanes with maximum certificated take-off mass of 272 000 kg or over, decreasing linearly with the logarithm of the mass at the rate of 5 EPNdB per halving of the mass down to 93 EPNdB at 34 000 kg, after which the limit remains constant.

(*b*) The maximum noise levels of those aeroplanes covered by 16.3.1.1(*b*), when determined in accordance with the noise evaluation method of Appendix 1 of ICAO Annex 16 Volume I Part II, shall not exceed the following :

(1) *At lateral noise measurement point* :

106 EPNdB for aeroplanes with maximum certificated take-off mass of 400 000 kg or over, decreasing linearly with the logarithm of the mass down to 97 EPNdB at 35 000 kg, after which the limit remains constant.

(2) *At flyover noise measurement point*

(*i*) *Aeroplanes with two engines or less*

104 EPNdB for aeroplanes with maximum certificated take-off mass of 325 000 kg or over, decreasing linearly with the logarithm of the mass at the rate of 4 EPNdB per halving of mass down to 93 EPNdB, after which the limit remains constant.

(*ii*) *Aeroplanes with three engines*

As (*i*) but with 107 EPNdB for aeroplanes with maximum certificated take-off mass of 325 000 kg or over or as defined by 16.3.1.4(*a*)(2), whichever is the lower.

(*iii*) *Aeroplanes with four engines or more*

As (*i*) but with 108 EPNdB for aeroplanes with maximum certificated take-off mass of 325,000kg or over or as defined by 16.3.1.4(*a*)(2), whichever is the lower.

(*c*) At approach noise measurement point 108 EPNdB for aeroplanes with maximum certificated take-off mass of 280,000 kg or over, decreasing linearly with the logarithm of the mass down to 101 EPNdB at 35 000 kg, after which the limit remains constant.

Trade-offs.

16.3.1.5.—(*a*) If the maximum noise levels are exceeded at one or two measurement points :

(1) the sum of excesses shall not be greater than 4 EPNdB, except that in respect of four-engined aeroplanes powered by engines with a bypass ratio of 2 or more and for which the application for a certificate of airworthiness for the prototype was accepted, or another equivalent prescribed procedure was carried out by the certificating authority, before 1 December 1969, the sum of any excesses shall not be greater than 5 EPNdB ;

(2) any excess at any single point shall not be greater than 3 EPNdB ; and

(3) any excesses shall be offset by corresponding reductions at the other point or points.

Test procedures.

16.3.1.6.—(*a*) Take-off test procedure :

(1) Average take-off thrust (representative of the mean characteristics of the production engine) shall be used from the start of take-off to the point at which a height of at least 210 m (690ft) above the runway is reached, and the thrust thereafter shall not be reduced below that thrust which will maintain a climb gradient of at least 4 per cent.

(2) A speed of at least V2 + 19 km/h (V2 + 10 kt) shall be attained as soon as practicable after lift-off and be maintained throughout the take-off noise certification test.

(3) A constant take-off configuration selected by the applicant shall be maintained throughout the take-off noise certification demonstration test except that the landing gear may be retracted.

(*b*) Approach test procedure :

(1) The aeroplane shall be stabilized and following a 3° ± 0.5° glide path.

(2) The approach shall be made at a stabilized airspeed of not less than 1.3 VS + 19 km/h (1.3 VS + 10 kt) with thrust stabilized during approach and over the measuring point and continued to a normal touchdown.

(3) The configuration of the aeroplane shall be with maximum allowable landing flap setting.

16.4.—(*a*) SUBSONIC JET AEROPLANES—

Application for Type Certificate submitted on or after 6 October 1977 and before 1 January 2006.

(*b*) PROPELLER-DRIVEN AEROPLANES OVER 8618kg—

Application for Type Certificate submitted on or after 1 January 1985 and before 1 January 2006.

Applicability.

16.4.1.1.—(*a*) The requirements of this subpart shall, with the exception of those propeller-driven aeroplanes specifically designed and used for agricultural or fire-fighting purposes, be applicable to :

(1) all subsonic jet aeroplanes, including their derived versions, other than aeroplanes which require a runway (with no stopway or clearway) length of 610 m or less at maximum certificated mass for airworthiness, for which the application for a Type Certificate was submitted on or after 6 October 1977 and before 1 January 2006 ; and

(2) all propeller-driven aeroplanes, including their derived versions, of over 8618 kg maximum certificated take-off mass, for which the application for a Type Certificate was submitted on or after 1 January 1985 and before 1 January 2006.

(*b*) Notwithstanding 16.4.1.1(*a*), it may be recognized by the Authority that the following situations for jet aeroplanes and propeller-driven heavy aeroplanes on its registry do not require demonstration of compliance with the provisions of the requirements of this Part :

(1) gear down flight with one or more retractable landing gear down during the entire flight ;

(2) spare engine and nacelle carriage external to the skin of the aeroplane (and return of the pylon or other external mount) ; and

(3) time-limited engine and/or nacelle changes, where the change in type design specifies that the aeroplane may not be operated for a period of more than 90 days unless compliance with the provisions of Part, is shown for that change in type design. This applies only to changes resulting from a required maintenance action.

Noise measurements.

16.4.1.2.—(*a*) Noise evaluation measure :

The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 2 of ICAO Annex 16 Volume 1 Part II.

Noise measurement points.

16.4.1.3.—(*a*) Reference noise measurement points :

An aeroplane, when tested in accordance with these requirements, shall not exceed the noise levels specified in 16.4.1.4 at the following points :

(1) *lateral full-power reference noise measurement point*

(*i*) for jet-powered aeroplanes : the point on a line parallel to and 450 m from the runway centre line, where the noise level is a maximum during take-off ;

(*ii*) for propeller-driven aeroplanes : the point on the extended centre line of the runway 650 m vertically below the climb-out flight path at full take-off power, as defined in 16.4.1.6(*b*). Until 19 March 2002, the requirement for lateral noise in 16.4.1.3.(*a*) (1)(*i*) shall alternatively be permitted ;

NOTE.—For aeroplanes specified in 16.4.1.1(*b*) for which the application for a Type Certificate was submitted before 19 March 2002, the lateral noise requirement specified in 16.4.1.3(*a*) (1) is permitted as an alternative.

(2) flyover reference noise measurement point : the point on the extended centre line of the runway and at a distance of 6.5 km from the start of roll ;

(3) approach reference noise measurement point : the point on the ground, on the extended centre line of the runway, 2 000 m from the threshold. On level ground this corresponds to a position 120 m (394 ft) vertically below the 3° descent path originating from a point 300 m beyond the threshold.

(*b*) Test noise measurement points

(1) If the test noise measurement points are not located at the reference noise measurement points, any corrections for the difference in position shall be made in the same manner as the corrections for the differences between test and reference flight paths.

(2) Sufficient lateral test noise measurement points shall be used to demonstrate to the Authority that the maximum noise level on the appropriate lateral line has been clearly determined. For jet-powered aeroplanes simultaneous measurements shall be made at one test noise measurement point at a symmetrical position on the other side of the runway. In the case of propeller-driven aeroplanes, because of their inherent asymmetry in lateral noise, simultaneous measurements shall be made at each and every test noise measurement point at a symmetrical position (within ±10 m parallel with the axis of the runway) on the opposite side of the runway.

Maximum noise levels.

16.4.1.4.—(*a*) The maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 2 of ICAO Annex 16 Volume I Part II, shall not exceed the following :

(1) *At the lateral full-power reference noise measurement point*

103 EPNdB for aeroplanes with maximum certificated take-off mass, at which the noise certification is requested, of 400,000kg and over and decreasing linearly with the logarithm of the mass down to 94 EPNdB at 35,000kg, after which the limit remains constant.

(2) *At flyover reference noise measurement point*

(*i*) *Aeroplanes with two engines or less*

101 EPNdB for aeroplanes with maximum certificated take-off mass, at which the noise certification is requested, of 385,000 kg and over and

decreasing linearly with the logarithm of the aeroplane mass at the rate of 4 EPNdB per halving of mass down to 89 EPNdB, after which the limit is constant.

(*ii*) *Aeroplanes with three engines*

As (i) but with 104 EPNdB for aeroplanes with maximum certificated take-off mass of 385,000 kg and over.

(*iii*) *Aeroplanes with four engines or more*

As (*i*) but with 106 EPNdB for aeroplanes with maximum certificated take-off mass of 385,000 kg and over.

(3) *At approach reference noise measurement point*

105 EPNdB for aeroplanes with maximum certificated take-off mass, at which the noise certification is requested, of 280,000 kg or over, and decreasing linearly with the logarithm of the mass down to 98 EPNdB at 35 000 kg, after which the limit remains constant.

Trade-offs.

16.4.1.5.—(*a*) If the maximum noise levels are exceeded at one or two measurement points :

(1) the sum of excesses shall not be greater than 3 EPNdB ;

(2) any excess at any single point shall not be greater than 2 EPNdB ; and

(3) any excesses shall be offset by corresponding reductions at the other point or points.

Noise certification reference procedures.

16.4.1.6.—(*a*) General conditions

(1) The reference procedures shall comply with the appropriate airworthiness requirements

(2) The calculations of reference procedures and flight paths shall be approved by the certificating authority.

(3) Except in conditions specified in 16.4.1.6(*a*)(4), the take-off and approach reference procedures shall be those defined in 16.4.1.6(*b*) and 16.4.1.6(*c*), respectively.

(4) When it is shown by the applicant that the design characteristics of the aeroplane would prevent flight being conducted in accordance with 16.4.1.6(*b*) and 16.4.1.6(*c*), the reference procedures shall :

(*i*) depart from the reference procedures defined in 16.4.1.6(*b*) and 16.4.1.6(*c*) only to the extent demanded by those design characteristics which make compliance with the procedures impossible ; and

(5) be approved by the certificating authority.

(6) The reference procedures shall be calculated under the following reference atmospheric conditions :

(*i*) sea level atmospheric pressure of 1013.25 hPa ;

(*ii*) ambient air temperature of 25°C, i.e. ISA + 10°C ;

(*iii*) relative humidity of 70 per cent ;

(*iv*) zero wind ; and

(*v*) for the purpose of defining the reference take-off profiles for both take-off and lateral noise measurements, the runway gradient is zero.

(*b*) Take-off reference procedure

Take-off reference flight path shall be calculated as follows :

(1) average engine take-off thrust or power shall be used from the start of take-off to the point where at least the following height above runway level is reached :

(*i*) aeroplanes with two engines or less - 300m (984 ft) ;

(*ii*) aeroplanes with three engines - 260m (853 ft) ;

(*iii*) aeroplanes with four engines or more - 210m (689 ft) ;

(2) upon reaching the height specified in (*a*) above, the thrust or power shall not be reduced below that required to maintain :

(*i*) a climb gradient of 4 per cent ; or

(*ii*) in the case of multi-engined aeroplanes, level flight with one engine inoperative ; whichever thrust or power is greater ;

(3) for the purpose of determining the lateral full-power noise level, the reference flight path shall be calculated on the basis of using full take-off power throughout without a thrust or power reduction ;

(4) the speed shall be :

(*i*) for those aeroplanes for which the applicable airworthiness requirements define V2, the all engines operating take-off climb speed selected by the applicant for use in normal operation, which shall be at least V2 + 19 km/h (V2 + 10 kt) but not greater than V2 + 37 km/h (V2 + 20 kt) and which shall be attained as soon as practicable after lift-off and be maintained throughout the take-off noise certification test. The increment applied to V2 shall be the same for all reference masses of an aeroplane model unless a difference in increment is substantiated based on performance characteristics of the aeroplane.

(*ii*) for those aeroplanes for which the applicable airworthiness requirements do not define V2, the take-off speed at 15 m (50 ft) plus an increment of at least 19 km/h (10 kt) but not greater than 37 km/h (20 kt), or the minimum climb speed, whichever speed is greater. This speed shall be attained as soon as practicable after lift-off and be maintained throughout the take-off noise certification test.

(5) a constant take-off configuration selected by the applicant shall be maintained throughout the take-off reference procedure except that the

landing gear may be retracted. Configuration shall be interpreted as meaning the conditions of the systems and centre of gravity position and shall include the position of lift augmentation devices used, whether the APU is operating, and whether air bleeds and power off-takes are operating ;

(6) the mass of the aeroplane at the brake release shall be the maximum take-off mass at which the noise certification is requested ; and

(7) the average engine shall be defined by the average of all the certification compliant engines used during the aeroplane flight tests up to and during certification when operated to the limitations and procedures given in the flight manual. This will establish a technical standard including the relationship of thrust/power to control parameters (e.g. N1 or EPR). Noise measurements made during certification tests shall be corrected to this standard.

(*c*) Approach reference procedure

The approach reference flight path shall be calculated as follows :

(1) the aeroplane shall be stabilized and following a 3° glide path ;

(2) a steady approach speed of VREF + 19 km/h (VREF + 10 kt), with thrust or power stabilized, shall be maintained over the measurement point ;

(3) the constant approach configuration as used in the airworthiness certification tests, but with the landing gear down, shall be maintained throughout the approach reference procedure ;

(4) the mass of the aeroplane at the touchdown shall be the maximum landing mass permitted in the approach configuration defined in 16.4.1.6(*c*)(3) at which noise certification is requested ; and

(5) the most critical (that which produces the highest noise level) configuration with normal deployment of aerodynamic control surfaces including lift and drag producing devices, at the mass at which certification is requested shall be used. This configuration includes all those items listed in 5.2.5 of Appendix 2, ICAO Annex 16 Volume I Part II that will contribute to the noisiest continuous state at the maximum landing mass in normal operation.

Test procedures.

16.4.1.7.—(*a*) The test procedures shall be acceptable to the Authority.

(*b*) The test procedures and noise measurements shall be conducted and processed in an approved manner to yield the noise evaluation measure designated as effective perceived noise level, EPNL, in units of EPNdB, as described in Appendix 2 of ICAO Annex 16 Volume I Part II.

(*c*) Acoustic data shall be adjusted by the methods outlined in Appendix 2 of ICAO Annex 16 Volume I Part II to the reference conditions specified in this Part. Adjustments for speed and thrust shall be made as described in Section 8 of Appendix 2 of ICAO Annex 16 Volume I Part II.

(*d*) If the mass during the test is different from the mass at which the noise certification is requested, the necessary EPNL adjustment shall not exceed 2 EPNdB for take-offs and 1 EPNdB for approaches. Data approved by the certificating authority shall be used to determine the variation of EPNL with mass for both take-off and approach test conditions. Similarly the necessary EPNL adjustment for variations in approach flight path from the reference flight path shall not exceed 2 EPNdB.

(*e*) For the approach conditions the test procedures shall be accepted if the aeroplane follows a steady glide path angle of 3° ± 0.5°.

(*f*) If equivalent test procedures different from the reference procedures are used, the test procedures and all methods for adjusting the results to the reference procedures shall be approved by the certificating authority. The amounts of the adjustments shall not exceed 16 EPNdB on take-off and 8 EPNdB on approach, and if the adjustments are more than 8 EPNdB and 4 EPNdB, respectively, the resulting numbers shall be more than 2 EPNdB below the noise limits specified in 16.4.1.4.

(*g*) For take-off, lateral, and approach conditions, the variation in instantaneous indicated airspeed of the aeroplane must be maintained within ±3 per cent of the average airspeed between the 10 dB-down points. This shall be determined by reference to the pilot's airspeed indicator. However, when the instantaneous indicated airspeed varies from the average airspeed over the 10 dB-down points by more than ±5.5 km/h (±3 kt), and this is judged by the certificating authority representative on the flight deck to be due to atmospheric turbulence, then the flight so affected shall be rejected for noise certification purposes.

16.5.—(*a*) SUBSONIC JET AEROPLANES AND PROPELLER-DRIVEN AEROPLANES WITH MAXIMUM CERTIFICATED TAKE-OFF MASS 55,000KG AND OVER — Application for Type Certificate submitted on or after 1 January 2006 and before 31 December 2017.

(*b*) SUBSONIC JET AEROPLANES WITH MAXIMUM CERTIFICATED TAKE-OFF MASS LESS THAN 55,000KG — Application for Type Certificate submitted on or after 1 January 2006 and before 31 December 2020.

(*c*) PROPELLER-DRIVEN AEROPLANES WITH MAXIMUM CERTIFICATED TAKE-OFF MASS OVER 8,618KG AND LESS THAN 55,000KG — Application for Type Certificate submitted or after 1 January 2006 and before 31 December 2020.

16.5.1.1.—(*a*) The requirements of this subpart shall, with the exception of those aeroplanes which require a runway (with no stopway or clearway length) of 610 m or less at maximum certificated mass for airworthiness or propeller-driven aeroplanes specifically designed and used for agricultural or firefighting purposes, be applicable to : Applicability.

(1) all subsonic jet aeroplanes and propeller-driven aeroplanes, including their derived versions, with a maximum certificated take-off mass of 55,000 kg and over for which the application for a Type Certificate was submitted on or after 1 January 2006 and before 31 December 2017;

(2) all subsonic jet aeroplanes, including their derived versions, with a maximum certificated take-off mass of less than 55,000 kg for which the application for a Type Certificate was submitted on or after 1 January 2006 and before 31 December 2020 ;

(3) all propeller-driven aeroplanes, including their derived versions, with a maximum certificated take-off mass of over 8,618 kg and less than 55,000 kg, for which the application for a Type Certificate was submitted on or after 1 January 2006 and before 31 December 2020 ; and

(4) all subsonic jet aeroplanes and all propeller-driven aeroplanes certificated originally as satisfying subpart 16.4 or subpart 16.6, for which recertification to subpart 16.5 is requested.

(*b*) Notwithstanding 16.5.1.1(*a*), it may be recognized by the Authority that the following situations for jet aeroplanes and propeller-driven aeroplanes over 8 618 kg maximum certificated take-off mass on its registry do not require demonstration of compliance with the provisions of the requirements of ICAO Annex 16, Volume I :

(1) gear down flight with one or more retractable landing gear down during the entire flight ;

(2) spare engine and nacelle carriage external to the skin of the aeroplane (and return of the pylon or other external mount) ; and

(3) time-limited engine and/or nacelle changes, where the change in type design specifies that the aeroplane may not be operated for a period of more than 90 days unless compliance with the provisions of ICAO Annex 16, Volume I, is shown for that change in type design. This applies only to changes resulting from a required maintenance action.

Noise measurements.

16.5.1.2.—(*a*) Noise evaluation measure

(1) The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 2 of ICAO Annex 16 Volume I Part II.

Reference noise measurement points.

16.5.1.3.—(*a*) An aeroplane, when tested in accordance with these requirements, shall not exceed the maximum noise level specified in 16.5.1.4 of the noise measured at the points specified in subpart 16.4, 16.4.1.3(*a*) (1)(2)(3).

(*b*) Test noise measurement points

(1) The provisions of subpart 16.4, 16.4.1.2, relating to test noise measurement points shall apply.

16.5.1.4.—(*a*) The maximum permitted noise levels are defined in subpart 16.4, 16.4.1.4(*a*), 16.4.1.4(*b*) and 16.4.1.4(*c*), and shall not be exceeded at any of the measurement points. Maximum noise levels.

(*b*) The sum of the differences at all three measurement points between the maximum noise levels and the maximum permitted noise levels.

(*c*) The sum of the differences at any two measurement points between the maximum noise levels and the corresponding maximum permitted noise levels specified in subpart 16.4, 16.4.1.4(*a*), 16.4.1.4(*b*) and 16.4.1.4(*c*), shall not be less than 2 EPNdB.

16.5.1.5.—(*a*) The noise certification reference procedures shall be as specified in subpart 16.4, 16.4.1.6. Noise certification reference procedures.

16.5.1.6.—(*a*) The test procedures shall be as specified in subpart 16.4, 16.4.1.7. Test procedures.

16.5.1.7.—(*a*) For aeroplanes specified in 16.5.1.1(*a*)(3), recertification shall be granted on the basis that the evidence used to determine compliance with subpart 16.5 is as satisfactory as the evidence associated with aeroplanes specified in 16.5.1.1(*a*)(1) and 16.5.1.1(*a*)(2). Recertification.

16.6. Propeller-Driven Aeroplanes Over 8618Kg — Application for Type Certificate submitted before 1 January 1985.

16.6.1.1.—(*a*) The requirements defined hereunder are not applicable to : Applicability.

(1) aeroplanes requiring a runway length (with no stopway or clearway) of 610m or less at maximum certificated mass for airworthiness ;

(2) aeroplanes specifically designed and used for firefighting purposes ; and

(3) aeroplanes specifically designed and used for agricultural purposes.

(*b*) The requirements of this subpart shall be applicable to all propeller-driven aeroplanes, including their derived versions, of over 8618 kg maximum certificated take-off mass for which either the application for a Type Certificate was submitted on or after 6 October 1977 and before 1 January 1985.

(*c*) The requirements of subpart 16.3, with the exception of Sections 16.3.1.1 and 16.3.1.4(*b*), shall be applicable to propeller-driven aeroplanes of over 8618 kg for which the application for a Type Certificate was submitted before 6 October 1977 and which are either :

(1) derived versions for which the application for certification of the change in type design was submitted on or after 6 October 1977; or

(2) individual aeroplanes for which a certificate of airworthiness was first issued on or after 26 November 1981.

(*d*) Notwithstanding 16.6.1.1(*b*) and 16.6.1.1(*c*), it may be recognized by the Authority that the following situations for jet aeroplanes and propeller-driven aeroplanes over 8,618 kg maximum certificated take-off mass on its registry do not require demonstration of compliance with the provisions of this Part.

(1) gear down flight with one or more retractable landing gear down during the entire flight ;

(2) spare engine and nacelle carriage external to the skin of the aeroplane (and return of the pylon or other external mount) ; and

(3) time-limited engine and/or nacelle changes, where the change in type design specifies that the aeroplane may not be operated for a period of more than 90 days unless compliance with the provisions of Annex 16, Volume I, is shown for that change in type design. This applies only to changes resulting from a required maintenance action.

Noise measurements.

16.6.1.2.—(*a*) Noise evaluation measure :

(1) The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 2 of ICAO Annex 16 Volume I Part II.

Noise measurement points.

16.6.1.3.—(*a*) Reference noise measurement points :

An aeroplane, when tested in accordance with these requirements, shall not exceed the noise levels specified in 16.6.1.4 at the following points :

(1) *lateral reference noise measurement point* : the point on a line parallel to and 450 m from the runway centre line, or extended runway centre line, where the noise level is a maximum during take-off ;

(2) *flyover reference noise measurement point* : the point on the extended centre line of the runway and at a distance of 6.5 km from the start of roll ; and

(3) *approach reference noise measurement point* : the point on the ground, on the extended centre line of the runway, 2 000 m from the threshold. On level ground this corresponds to a position 120 m (394 ft) vertically below the 3° descent path originating from a point 300 m beyond the threshold.

(*b*) Test noise measurement points

(1) If the test noise measurement points are not located at the reference noise measurement points, any corrections for the difference in position shall be made in the same manner as the corrections for the differences between test and reference flight paths.

(2) Sufficient lateral test noise measurement points shall be used to demonstrate to the Authority that the maximum noise level on the appropriate lateral line has been clearly determined. Simultaneous measurements shall

be made at one test noise measurement point at a symmetrical position on the other side of the runway.

16.6.1.4. The maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 2 of ICAO Annex 16 Volume I Part II, shall not exceed the following : Maximum noise levels.

(*a*) at lateral reference noise measurement point: 96 EPNdB constant limit for aeroplanes with maximum take-off mass, at which the noise certification is requested, up to 34 000 kg and increasing linearly with the logarithm of aeroplane mass at the rate of 2 EPNdB per doubling of mass from that point until the limit of 103 EPNdB is reached, after which the limit is constant ;

(*b*) *at flyover reference noise measurement point* : 89 EPNdB constant limit for aeroplanes with maximum take-off mass, at which the noise certification is requested, up to 34 000 kg and increasing linearly with the logarithm of aeroplane mass at the rate of 5 EPNdB per doubling of mass from that point until the limit of 106 EPNdB is reached, after which the limit is constant ; and

(*c*) *at approach reference noise measurement point* : 98 EPNdB constant limit for aeroplanes with maximum take-off mass, at which the noise certification is requested, up to 34 000 kg and increasing linearly with the logarithm of aeroplane mass at the rate of 2 EPNdB per doubling of mass from that point until the limit of 105 EPNdB is reached, after which the limit is constant.

16.6.1.5.—(*a*) If the maximum noise levels are exceeded at one or two measurement points : Trade-offs.

(1) the sum of excesses shall not be greater than 3 EPNdB ;

(2) any excess at any single point shall not be greater than 2 EPNdB ; and

(3) any excesses shall be offset by corresponding reductions at the other point or points.

16.6.1.6.—(*a*) General conditions— Noise certification reference procedures.

(1) The reference procedures shall comply with the appropriate airworthiness requirements.

(2) The calculations of reference procedures and flight paths shall be approved by the certificating authority.

(3) Except in conditions specified in 16.6.1.6(*a*)(4), the take-off and approach reference procedures shall be those defined in 16.6.1.6(*b*) and 16.6.1.6(*c*), respectively.

(4) When it is shown by the applicant that the design characteristics of the aeroplane would prevent flight being conducted in accordance with 16.6.1.6(*b*) and 16.6.1.6(*c*), the reference procedures shall :

(*i*) depart from the reference procedures defined in 16.6.1.6(*b*) and 16.6.1.6(*c*), only to the extent demanded by those design characteristics which make compliance with the procedures impossible ; and

(*ii*) be approved by the certificating authority.

(5) The reference procedures shall be calculated under the following reference atmospheric conditions :

(*i*) sea level atmospheric pressure of 1013.25 hPa ;

(*ii*) ambient air temperature of 25°C, i.e. ISA + 10°C except that at the discretion of the Authority, an alternative reference ambient air temperature of 15°C, i.e. ISA may be used ;

(*iii*) relative humidity of 70 per cent ; and

(*iv*) zero wind.

(*b*) Take-off reference procedure :

The take-off flight path shall be calculated as follows :

(1) average take-off power shall be used from the start of take-off to the point where at least the height above runway level shown below is reached. The take-off power used shall be the maximum available for normal operations as scheduled in the performance section of the aeroplane flight manual for the reference atmospheric conditions given in 16.6.1.6(*a*)(5) ;

(*i*) aeroplanes with two engines or less - 300 m (984 ft) ;

(*ii*) aeroplanes with three engines - 260 m (853 ft) ;

(*iii*) aeroplanes with four engines or more - 210 m (689 ft) ;

(2) upon reaching the height specified in a) above, the power shall not be reduced below that required to maintain :

(*i*) a climb gradient of 4 per cent ; or

(*ii*) in the case of multi-engined aeroplanes, level flight with one engine inoperative ; whichever power is the greater ;

(3) the speed shall be the all-engines operating take-off climb speed selected by the applicant for use in normal operation, which shall be at least V2 + 19 km/h (V2 + 10 kt) and which shall be attained as soon as practicable after lift-off and be maintained throughout the take-off noise certification test ;

(4) a constant take-off configuration selected by the applicant shall be maintained throughout the take-off reference procedure except that the landing gear may be retracted ; and

(5) the mass of the aeroplane at the brake release shall be the maximum take-off mass at which the noise certification is requested.

(*c*) Approach reference procedure :

The approach reference flight path shall be calculated as follows :

(1) the aeroplane shall be stabilized and following a 3° glide path ;

(2) the approach shall be made at a stabilized airspeed of not less than 1.3 VS + 19 km/h (1.3 VS + 10 kt) with power stabilized during approach and over the measuring point and continued to a normal touchdown ;

(3) the constant approach configuration used in the airworthiness certification test, but with the landing gear down, shall be maintained throughout the approach reference procedure ;

(4) the mass of the aeroplane at the touchdown shall be the maximum landing mass permitted in the approach configuration defined in 16.6.1.6(*c*)(3) at which noise certification is requested ; and

(5) the most critical (that which produces the highest noise levels) configuration at the mass at which certification is requested, shall be used.

16.6.1.7.—(*a*) The test procedures shall be acceptable to the Authority. Test procedures.

(*b*) The test procedures and noise measurements shall be conducted and processed in an approved manner to yield the noise evaluation measure designated as effective perceived noise level, EPNL, in units of EPNdB, as described in Appendix 2 of ICAO Annex 16 Volume I Part II.

(*c*) Acoustic data shall be adjusted by the methods outlined in Appendix 2 of ICAO Annex 16 Volume I Part II to the reference conditions specified in this chapter. Adjustments for speed and thrust shall be made as described in Section 8 of Appendix 2 2 of ICAO Annex 16 Volume I Part II.

(*d*) If the mass during the test is different from the mass at which the noise certification is requested, the necessary EPNL adjustment shall not exceed 2 EPNdB for take-offs and 1 EPNdB for approaches. Data approved by the certificating authority shall be used to determine the variation of EPNL with mass for both take-off and approach test conditions. Similarly, the necessary EPNL adjustment for variations in approach flight path from the reference flight path shall not exceed 2 EPNdB.

(*e*) For the approach conditions the test procedures shall be accepted if the aeroplane follows a steady glide path angle of 3° ± 0.5°.

(*f*) If equivalent test procedures different from the reference procedures are used, the test procedures and all methods for adjusting the results to the reference procedures shall be approved by the certificating authority. The amounts of the adjustments shall not exceed 16 EPNdB on take-off and 8

EPNdB on a pproach, and if the adjustments are more than 8 EPNdB and 4 EPNdB, respectively, the resulting numbers shall not be within 2 EPNdB of the limit noise levels specified in 16.6.1.4.

16.7. PROPELLER-DRIVEN AEROPLANES NOT EXCEEDING 8618KG — Application for Type Certificate submitted before 17 November 1988.

Applicability.

16.7.1.1.—(*a*) The requirements of this subpart shall be applicable to all propeller-driven aeroplanes, except those aeroplanes specifically designed and used for aerobatic, agricultural or fire fighting purposes, having a maximum certificated take-off mass not exceeding 8618 kg for which either :

(1) the application for the Type Certificate was submitted on or after 1 January 1975 and before 17 November 1988, except for derived versions for which the application for certification of the change in type design was submitted on or after 17 November 1988, in which case the requirements of subpart 16.10 10 apply ; or

(2) a certificate of airworthiness for the individual aeroplane was first issued on or after 1 January 1980.

Noise evaluation measure.

16.7.1.2.—(*a*) The noise evaluation measure shall be a weighted overall sound pressure level as defined in International Electro technical Commission (IEC) Publication No. 179. The weighting applied to each sinusoidal component of the sound pressure shall be given as a function of frequency by the standard reference curve called “A”.

Maximum noise levels.

16.7.1.3.—(*a*) For aeroplanes specified in 16.7.1.1(*a*)(1) and (2), the maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 3 of ICAO Annex 16 Volume I Part II, shall not exceed the following :

(1) a 68 dB(A) constant limit up to an aeroplane mass of 600 kg, varying linearly with mass from that point to 1 500 kg, after which the limit is constant at 80 dB(A) up to 8 618 kg.

Noise certification reference procedures.

16.7.1.4. The reference procedure shall be calculated under the following reference atmospheric conditions :

(*a*) sea level atmospheric pressure of 1013.25 hPa ;

(*b*) ambient air temperature of 25°C, i.e. ISA + 10°C.

Test procedures.

16.7.1.5.—(*a*) Either the test procedures described in 16.7.1.5(*b*) and 16.7.1.5(*c*) or equivalent test procedures approved by the Authority shall be used.

(*b*) Tests to demonstrate compliance with the maximum noise levels of 16.6.3 shall consist of a series of level flights overhead the measuring station at a height of 300^{+10}_{-30} m (985^{+30}_{-100} ft) The aeroplane shall pass over the measuring point within ±10° from the vertical.

(*c*) Overflight shall be performed at the highest power in the normal operating range, stabilized airspeed and with the aeroplane in the cruise configuration.

16.8. HELICOPTERS

16.8.1.1.—(*a*) The requirements of this subpart shall be applicable to all helicopters for which 16.8.1.1(*b*), 16.8.1.1(*c*) and 16.8.1.1(*d*) apply, except those specifically designed and used for agricultural, fire fighting or external load carrying purposes. Applicability.

(*b*) For a helicopter for which the application for the Type Certificate was submitted on or after 1 January 1985, except for those helicopters specified in 16.8.1.1(*d*), the maximum noise levels of 16.8.1.4 shall apply.

(*c*) For a derived version of a helicopter for which the application for certification of the change in type design was submitted on or after 17 November 1988, except for those helicopters specified in 16.8.1.1(*d*), the maximum noise levels of 16.8.1.4 shall apply.

(*d*) For all helicopters, including their derived versions, for which the application for the Type Certificate was submitted on or after 21 March 2002, the maximum noise levels of 16.8.1.4 shall apply.

(*e*) Certification of helicopters which are capable of carrying external loads or external equipment shall be made without such loads or equipment fitted.

(*f*) An applicant under 8.1.1 may alternatively elect to show compliance with 16.11 instead of 16.8 if the helicopter has a maximum certificated take-off mass of 3,175 kg or less.

16.8.1.2.—(*a*) The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 2 of ICAO Annex 16 Volume I Part II. Noise evaluation measure.

16.8.1.3.—(*a*) A helicopter, when tested in accordance with these requirements, shall not exceed the noise levels specified in 16.8.1.4 at the following points : Reference noise measurement points.

(1) *Take-off reference noise measurement points* :

(*i*) a flight path reference point located on the ground vertically below the flight path defined in the take-off reference procedure and 500 m horizontally in the direction of flight from the point at which transition to climbing flight is initiated in the reference procedure (see 16.8.1.6(b)) ;

(*ii*) two other points on the ground symmetrically disposed at 150 m on both sides of the flight path defined in the take-off reference procedure and lying on a line through the flight path reference point.

(2) *Overflight reference noise measurement points* :

(*i*) a flight path reference point located on the ground 150 m (492 ft) vertically below the flight path defined in the overflight reference procedure (see 16.8.1.6(*c*)) ;

(*ii*) two other points on the ground symmetrically disposed at 150 m on both sides of the flight path defined in the overflight reference procedure and lying on a line through the flight path reference point.

(3) *Approach reference noise measurement points* :

(1) a flight path reference point located on the ground 120 m (394 ft) vertically below the flight path defined in the approach reference procedure (see 16.8.1.6(*d*)). On level ground, this corresponds to a position 1,140 m from the intersection of the 6.0° approach path with the ground plane ;

(2) two other points on the ground symmetrically disposed at 150 m on both sides of the flight path defined in the approach reference procedure and lying on a line through the flight path reference point.

Maximum noise levels.

16.8.1.4.—(*a*) For helicopters specified in 16.8.1.1(*a*) and (*b*), the maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 2 of ICAO Annex 16 Volume I Part II, shall not exceed the following :

(1) *For take-off* : 109 EPNdB for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly with the logarithm of the helicopter mass at a rate of 3 EPNdB per halving of mass down to 89 EPNdB after which the limit is constant.

(2) *For overflight* : 108 EPNdB for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly with the logarithm of the helicopter mass at a rate of 3 EPNdB per halving of mass down to 88 EPNdB after which the limit is constant.

(3) *For approach* : 110 EPNdB for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly with the logarithm of the helicopter mass at a rate of 3 EPNdB per halving of mass down to 90 EPNdB after which the limit is constant.

(*b*) For helicopters specified in 16.8.1.4(*a*), the maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 2 of ICAO Annex 16 Volume I Part II, shall not exceed the following :

(1) *For take-off* : 106 EPNdB for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg

and over and decreasing linearly with the logarithm of the helicopter mass at a rate of 3 EPNdB per halving of mass down to 86 EPNdB after which the limit is constant.

(2) *For overflight* : 104 EPNdB for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly with the logarithm of the helicopter mass at a rate of 3 EPNdB per halving of mass down to 84 EPNdB after which the limit is constant.

(3) *For approach* : 109 EPNdB for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of 80 000 kg and over and decreasing linearly with the logarithm of the helicopter mass at a rate of 3 EPNdB per halving of mass down to 89 EPNdB after which the limit is constant.

Trade-offs.

16.8.1.5.—(*a*) If the noise level limits are exceeded at one or two measurement points :

(1) the sum of excesses shall not be greater than 4 EPNdB ;

(2) any excess at any single point shall not be greater than 3 EPNdB ; and

(3) any excess shall be offset by corresponding reductions at the other point or points.

Noise certification reference procedures.

16.8.1.6.—(*a*) General conditions

(1) The reference procedures shall comply with the appropriate airworthiness requirements.

(2) The reference procedures and flight paths shall be approved by the certificating authority.

(3) Except in conditions specified in 16.8.1.6(*a*)(4), the take-off, overflight and approach reference procedures shall be those defined in 16.8.1.6(*b*), 16.8.1.6(*c*) and 16.8.1.6(*d*), respectively.

(4) When it is shown by the applicant that the design characteristics of the helicopter would prevent flight being conducted in accordance with 16.8.1.6(*b*), 16.8.1.6(*c*) and 16.8.1.6(*d*), the reference procedures shall :

(*i*) depart from the reference procedures defined in 16.8.1.6(*b*), 16.8.1.6(*c*) or 16.8.1.6(*d*) only to the extent demanded by those design characteristics which make compliance with the reference procedures impossible ; and

(*ii*) be approved by the certificating authority.

(5) The reference procedures shall be established for the following reference atmospheric conditions :

(*i*) sea level atmospheric pressure of 1,013.25 hPa ;

(*ii*) ambient air temperature of 25°C, i.e. ISA + 10°C ;

(*iii*) relative humidity of 70 per cent ; and

(*iv*) zero wind.

(6) In 16.8.1.6(*b*)(3), 16.8.1.6(*c*)(3) and 16.8.1.6(*d*)(3), the maximum normal operating rpm shall be taken as the highest rotor speed for each reference procedure corresponding to the airworthiness limit imposed by the manufacturer and approved by the certificating authority. Where a tolerance on the highest rotor speed is specified, the maximum normal operating rotor speed shall be taken as the highest rotor speed about which that tolerance is given. If the rotor speed is automatically linked with flight condition, the maximum normal operating rotor speed corresponding with the reference flight condition shall be used during the noise certification procedure. If rotor speed can be changed by pilot action, the maximum normal operating rotor speed specified in the flight manual limitation section for the reference conditions shall be used during the noise certification procedure.

(*b*) Take-off reference procedure

The take-off reference flight procedure shall be established as follows :

(1) the helicopter shall be stabilized at the maximum take-off power corresponding to minimum installed engine(s) specification power available for the reference ambient conditions or gearbox torque limit, whichever is lower, and along a path starting from a point located 500 m prior to the flight path reference point, at 20 m (65 ft) above the ground ;

(2) the best rate of climb speed, V_y, or the lowest approved speed for the climb after take-off, whichever is the greater, shall be maintained throughout the take-off reference procedure ;

(3) the steady climb shall be made with the rotor speed stabilized at the maximum normal operating rpm certificated for take-off ;

(4) a constant take-off configuration selected by the applicant shall be maintained throughout the take-off reference procedure with the landing gear position consistent with the airworthiness certification tests for establishing the best rate of climb speed, V_y ;

(5) the mass of the helicopter shall be the maximum take-off mass at which noise certification is requested ; and

(6) the reference take-off path is defined as a straight line segment inclined from the starting point (500 m prior to the centre microphone location and 20 m (65ft) above ground level) at an angle defined by best rate of climb (BRC) and V_y for minimum specification engine performance.

(*c*) Overflight reference procedure

(1) The overflight reference procedure shall be established as follows :

(*i*) the helicopter shall be stabilized in level flight overhead the flight path reference point at a height of 150 m (492 ft) ;

(*ii*) a speed of 0.9 V_H or 0.9 V_{NE} or 0.45 V_H + 120 km/h (0.45 V_H + 65 kt) or 0.45 V_{NE} + 120 km/h (0.45 V_{NE} + 65 kt), whichever is the least, shall be maintained throughout the overflight reference procedure ;

NOTE.— *For noise certification purposes, V_H is defined as the airspeed in level flight obtained using the torque corresponding to minimum engine installed, maximum continuous power available for sea level pressure* (1013.25 *hPa*), *25°C ambient conditions at the relevant maximum certificated mass. V_{NE} is defined as the not-to-exceed airworthiness airspeed imposed by the manufacturer and approved by the certificating authority.*

(*iii*) the overflight shall be made with the rotor speed stabilized at the maximum normal operating rpm certificated for level flight ;

(*iv*) the helicopter shall be in the cruise configuration ; and

(*v*) the mass of the helicopter shall be the maximum take-off mass at which noise certification is requested.

(2) The value of V_H and/or V_{NE} used for noise certification shall be quoted in the approved flight manual.

(*d*) Approach reference procedure

(1) The approach reference procedure shall be established as follows :

(*i*) the helicopter shall be stabilized and following a 6.0° approach path ;

(*ii*) the approach shall be made at a stabilized airspeed equal to the best rate of climb speed, V_y, or the lowest approved speed for the approach, whichever is the greater, with power stabilized during the approach and over the flight path reference point, and continued to a normal touchdown ;

(*iii*) the approach shall be made with the rotor speed stabilized at the maximum normal operating rpm certificated for approach ;

(*iv*) the constant approach configuration used in airworthiness certification tests, with the landing gear extended, shall be maintained throughout the approach reference procedure ; and

(*v*) the mass of the helicopter at touchdown shall be the maximum landing mass at which noise certification is requested.

16.8.1.7.—(*a*) The test procedures shall be acceptable to the Authority. Test procedures.

(*b*) The test procedures and noise measurements shall be conducted and processed in an approved manner to yield the noise evaluation measure designated as effective perceived noise level, EPNL, in units of EPNdB, as described in Appendix 2 of ICAO Annex 16 Volume I Part II.

(*c*) Test conditions and procedures shall be closely similar to reference conditions and procedures or the acoustic data shall be adjusted, by the methods outlined in Appendix 2 of ICAO Annex 16 Volume I Part II, to the reference conditions and procedures specified in this subpart.

(*d*) Adjustments for differences between test and reference flight procedures shall not exceed :

(1) *for take-off* : 4.0 EPNdB, of which the arithmetic sum of $\triangle$ 1 and the term -7.5 log (QK/Q*r*K*r*) from 2 shall not in total exceed 2.0 EPNdB ;

(2) *for overflight or approach* : 2.0 EPNdB.

(*h*) During the test the average rotor rpm shall not vary from the normal maximum operating rpm by more than ±1.0 per cent during the 10 dB-down time period.

(*i*) The helicopter airspeed shall not vary from the reference airspeed appropriate to the flight demonstration by more than ±9 km/h (5 kt) throughout the 10 dB-down time period.

(*j*) The number of level overflights made with a headwind component shall be equal to the number of level overflights made with a tailwind component.

(*k*) The helicopter shall fly within ±10° or ±20 m, whichever is greater, from the vertical above the reference track throughout the 10 dB-down time period (see Figure below).

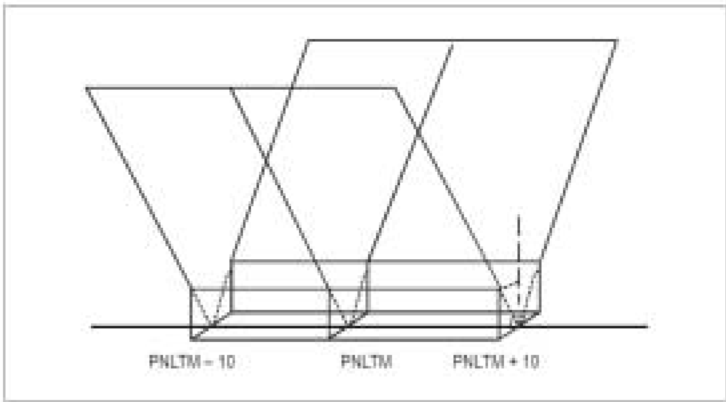

FIGURE 8-1. Helicopter lateral deviation tolerances

(*l*) The helicopter height shall not vary during overflight from the reference height at the overhead point by more than ±9 m (30 ft).

(*m*) During the approach noise demonstration the helicopter shall be established on a stabilized constant speed approach within the airspace contained between approach angles of 5.5° and 6.5°.

(*n*) Tests shall be conducted at a helicopter mass not less than 90 per cent of the relevant maximum certificated mass and may be conducted at a mass not exceeding 105 per cent of the relevant maximum certificated mass. For each of the three flight conditions, at least one test must be completed at or above this maximum certificated mass.

16.9. INSTALLED AUXILIARY POWER UNITS (APU) AND ASSOCIATED AIRCRAFT SYSTEMS DURING GROUND OPERATIONS — *Reserved*

16.10. PROPELLER-DRIVEN AEROPLANES NOT EXCEEDING 8618KG — Application for Type Certificate or Certification of Derived Version submitted on or after 17 November 1988.

16.10.1.1.—(*a*) The requirements of this subpart shall be applicable to all propeller-driven aeroplanes with a certificated take-off mass not exceeding 8,618 kg, except those aeroplanes specifically designed and used for aerobatic, agricultural or fire fighting purposes and self-sustaining powered sailplanes Applicability.

(*b*) For aeroplanes for which the application for the Type Certificate was submitted on or after 17 November 1988, except for those aeroplanes specified in 16.10.1.6, the maximum noise levels of 16.10.4(*a*)(1) shall apply.

(*c*) For aeroplanes specified in 16.10.1.1(*b*) where the application for the Type Certificate was submitted before 17 November 1993 and which fail to comply with the requirements of this subpart, the requirements of Part 16.6 shall apply.

(*d*) For derived versions for which the application for certification of the change in type design was submitted on or after 17 November 1988, except for those derived versions specified in 16.10.1.1(*f*), the maximum noise levels of 16.10.4 shall apply.

(*e*) For derived versions specified in 16.10.1.4 where the application for certification of the change in type design was submitted before 17 November 1993 and which fail to comply with the requirements of this Part, the requirements of Part 16.6 shall apply.

(*f*) For single-engined aeroplanes, except float planes and amphibians :

(1) the maximum noise levels of 16.10.1.4 (*a*)(2) shall apply to those aeroplanes, including their derived versions, for which the application for the Type Certificate was submitted on or after 4 November 1999 ;

(2) the maximum noise levels of 16.10.1.4(*b*) shall apply to those derived versions of aeroplanes for which the application for the Type Certificate was submitted before 4 November 1999 and for which the application for

certification of the change in type design was submitted on or after 4 November 1999 ; except

(3) for those derived versions described in 16.10.1.1(*f*)(2) where the application for certification of the change in type design was submitted before 4 November 2004 and which exceed the maximum noise levels of 16.10.4(*b*), in which case the maximum noise levels of 16.10.4(*a*) shall apply.

Noise evaluation measure.

16.10.1.2.—(*a*) The noise evaluation measure shall be the maximum A-weighted noise level (LAmax) as defined in Appendix 6 of ICAO Annex 16 Volume I Part II.

Reference noise measurement points.

16.10.1.3.—(*a*) An aeroplane, when tested in accordance with these requirements, shall not exceed the noise level specified in 16.10.1.4 at the take-off reference noise measurement point.

(*b*) The take-off reference noise measurement point is the point on the extended centre line of the runway at a distance of 2,500 m from the start of take-off roll.

Maximum noise levels.

16.10.1.4.—(*a*) The maximum noise levels determined in accordance with the noise evaluation method of Appendix 6 of ICAO Annex Volume I Part II shall not exceed the following :

(1) for aeroplanes specified in 16.10.1.1(*b*) and 16.10.1.1(*d*), a 76 dB(A) constant limit up to an aeroplane mass of 600 kg varying linearly from that point with the logarithm of aeroplane mass until at 1,400 kg the limit of 88 dB(A) is reached after which the limit is constant up to 8,618 kg ; and

(2) for aeroplanes specified in 16.10.1.1(*d*), a 70 dB(A) constant limit up to an aeroplane mass of 570 kg increasing linearly from that point with the logarithm of aeroplane mass until at 1,500 kg the limit of 85 dB(A) is reached after which the limit is constant up to 8,618 kg.

Noise certification reference procedures.

16.10.1.5.—(*a*) General conditions

(1) The calculations of reference procedures and flight paths shall be approved by the certificating authority.

(2) Except in conditions specified in 16.10.1.5(*a*)(3), the take-off reference procedure shall be that defined in 16.10.1.5.(*b*).

(3) When it is shown by the applicant that the design characteristics of the aeroplane would prevent flights being conducted in accordance with 16.10.1.5(*b*), the reference procedures shall :

(*i*) depart from the reference procedures defined only to the extent demanded by those design characteristics which make compliance with the procedures impossible ; and

(*ii*) be approved by the authority.

(4) The reference procedures shall be calculated under the following atmospheric conditions :

(*i*) sea level atmospheric pressure of 1,013.25 hPa ;

(*ii*) ambient air temperature of 15°C, i.e. ISA ;

(*iii*) relative humidity of 70 per cent ; and

(*iv*) zero wind.

(5) The acoustic reference atmospheric conditions shall be the same as the reference atmospheric conditions for flight.

(*b*) Take-off reference procedure

The take-off flight path shall be calculated taking into account the following two phases.

(1) First phase

(*i*) take-off power shall be used from the brake release point to the point at which the height of 15 m (50 ft) above the runway is reached ;

(*ii*) a constant take-off configuration selected by the applicant shall be maintained throughout this first phase ;

(*iii*) the mass of the aeroplane at the brake release shall be the maximum take-off mass at which the noise certification is requested ; and

(*iv*) the length of this first phase shall correspond to the length given in the airworthiness data for a take-off on a level paved runway.

(2) Second phase

(*i*) the beginning of the second phase corresponds to the end of the first phase ;

(*ii*) the aeroplane shall be in the climb configuration with landing gear up, if retractable, and flap setting corresponding to normal climb throughout this second phase ;

(*iii*) the speed shall be the best rate of climb speed, V_y ; and

(*iv*) take-off power and, for aeroplanes equipped with variable pitch or constant speed propellers, rpm shall be maintained throughout the second phase. If airworthiness limitations do not permit the application of take-off power and rpm up to the reference point, then take-off power and rpm shall be maintained for as long as is permitted by such limitations and thereafter at maximum continuous power and rpm. Limiting of time for which take-off power and rpm shall be used in order to comply with this chapter shall not be permitted. The reference height shall be calculated assuming climb gradients appropriate to each power setting used.

Test procedures.

16.10.1.6.—(*a*) The test procedures shall be acceptable to the Authority

(*b*) The test procedures and noise measurements shall be conducted and processed in an approved manner to yield the noise evaluation measure in units of LAmax as described in Appendix 6 of ICAO Annex 16 Volume I Part II.

(*c*) Acoustic data shall be adjusted by the methods outlined in Appendix 6 of ICAO Annex 16 Volume I Part II to the reference conditions specified in this subpart.

(*d*) If equivalent test procedures are used, the test procedures and all methods for correcting the results to the reference procedures shall be approved by the certificating authority

16.11. HELICOPTERS NOT EXCEEDING 3175 KG MAXIMUM CERTIFICATED TAKE-OFF MASS

Applicability.

16.11.1.1.—(*a*) The requirements of this subpart shall be applicable to all helicopters having a maximum certificated take-off mass not exceeding 3175 kg for which 16.11.1.1(*b*), (*c*) and (*d*) apply, except those specifically designed and used for agricultural, fire fighting or external load carrying purposes.

(*b*) For a helicopter for which the application for the Type Certificate was submitted on or after 11 November 1993, except for those helicopters specified in 16.11.1.1(*d*), the maximum noise levels of 16.11.1.4 shall apply.

(*c*) For a derived version of a helicopter for which the application for certification of the change in type design was submitted on or after 11 November 1993, except for those helicopters specified in 16.11.1.4, the maximum noise levels of 16.11.4.1 shall apply.

(*d*) For all helicopters, including their derived versions, for which the application for the Type Certificate was submitted on or after 21 March 2002, the maximum noise levels of 16.11.4.2 shall apply.

(*e*) Certification of helicopters which are capable of carrying external loads or external equipment shall be made without such loads or equipment fitted.

(*f*) An applicant under 16.11.1.1(*a*), (*b*), (*c*) and (*d*) may alternatively elect to show compliance with subpart 16.8 instead of complying with this Part.

Noise evaluation measure.

16.11.1.2.—(*a*) The noise evaluation measure shall be the sound exposure level (SEL) as described in Appendix 4 of ICAO Annex 16 Volume I Part II.

16.11.1.3. A helicopter, when tested in accordance with these requirements, shall not exceed the noise levels specified in 16.11.1.4 at a flight path reference point located on the ground 150 m (492 ft) vertically below the flight path defined in the overflight reference procedure (see 16.11.1.5(*b*)). Reference noise measurement point.

16.11.1.4.—(*a*) For helicopters specified in 16.11.1.1(*a*) and (*b*), the maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 4, shall not exceed 82 decibe is SEL for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of up to 788 kg and increasing linearly with the logarithm of the helicopter mass at a rate of 3 decibels per doubling of mass thereafter. Maximum noise level.

(*b*) For helicopters specified in 16.11.1.1(*d*), the maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 4 of ICAO Annex 16 Volume I Part II, shall not exceed 82 decibels SEL for helicopters with maximum certificated take-off mass, at which the noise certification is requested, of up to 1,417 kg and increasing linearly with the logarithm of the helicopter mass at a rate of 3 decibels per doubling of mass

16.11.1.5.—(*a*) General conditions Noise certification reference procedure.

(1) The reference procedure shall comply with the appropriate airworthiness requirements and shall be approved by the certificating authority.

(2) Except as otherwise approved, the overflight reference procedure shall be as defined in 16.11.1.5(*b*).

(3) When it is shown by the applicant that the design characteristics of the helicopter would prevent flight being conducted in accordance with 16.11.1.5(*b*) the reference procedure shall be permitted to depart from the standard reference procedure, with the approval of the authority, but only to the extent demanded by those design characteristics which make compliance with the reference procedures impossible.

(4) The reference procedure shall be established for the following reference atmospheric conditions :

(*i*) sea level atmospheric pressure of 1013.25 hPa ;

(*ii*) ambient air temperature of 25°C ;

(*iii*) relative humidity of 70 per cent ; and

(*iv*) zero wind.

(5) The maximum normal operating rpm shall be taken as the highest rotor speed corresponding to the airworthiness limit imposed by the manufacturer and approved by the authority for overflight. Where a tolerance on the highest rotor speed is specified, the maximum normal operating rotor speed shall be taken as the highest rotor speed about which that tolerance is

given. If rotor speed is automatically linked with flight condition, the maximum normal operating rotor speed corresponding with the reference flight condition shall be used during the noise certification procedure. If rotor speed can be changed by pilot action, the maximum normal operating rotor speed specified in the flight manual limitation section for the reference conditions shall be used during the noise certification procedure.

(*b*) Reference procedure

(*i*) The reference procedure shall be established as follows :

(*i*) the helicopter shall be stabilized in level flight overhead the flight path reference point at a height of 150 m (492 ft) ± 15 m (50 ft) ;

(*ii*) a speed of 0.9 V_H or 0.9 V_{NE} or 0.45 V_H + 120km/h (65 kt) or 0.45 V_{NE} + 120 km/h (65 kt), whichever is the least, shall be maintained throughout the overflight procedure. For noise certification purposes, V_H is defined as the airspeed in level flight obtained using the torque corresponding to minimum engine installed, maximum continuous power available for sea level pressure (1 013.25 hPa), 25°C ambient conditions at the relevant maximum certificated mass. V_{NE} is defined as the not-to-exceed airworthiness airspeed imposed by the manufacturer and approved by the certificating authority ;

(*iii*) the overflight shall be made with the rotor speed stabilized at the maximum normal operating rpm certificated for level flight ;

(*iv*) the helicopter shall be in the cruise configuration ; and

(v) the mass of the helicopter shall be the maximum take-off mass at which noise certification is requested.

(*c*) The value of VH and/or VNE used for noise certification shall be quoted in the approved flight manual.

Test procedures.

16.11.1.6.—(*a*) The test procedures shall be acceptable to the Authority.

(*b*) The test procedure and noise measurements shall be conducted and processed in an approved manner to yield the noise evaluation measure designated as sound exposure level (SEL), in A-weighted decibels, as described in Appendix 4 of ICAO Annex 16 Volume I Part II.

(*c*) Test conditions and procedures shall be closely similar to reference conditions and procedures or the acoustic data shall be adjusted, by the methods outlined in Appendix 4 of ICAO Annex 16 Volume I Part II, to the reference conditions and procedures specified in this Subpart.

(*d*) During the test, flights shall be made in equal numbers with tailwind and headwind components.

(*e*) Adjustments for differences between test and reference flight procedures shall not exceed 2.0 dB(A).

(*f*) During the test, the average rotor rpm shall not vary from the normal maximum operating rpm by more than ±1.0 per cent during the 10 dB-down time period.

(*g*) The helicopter airspeed shall not vary from the reference airspeed appropriate to the flight demonstration as described in Appendix 4 of ICAO Annex 16 Volume I Part II by more than ±5 km/h (±3 kt) throughout the 10 dB-down time period.

(*h*) The helicopter shall fly within ±10° from the vertical above the reference track through the reference noise measurement position.

(*i*) Tests shall be conducted at a helicopter mass not less than 90 per cent of the relevant maximum certificated mass and may be conducted at a mass not exceeding 105 per cent of the relevant maximum certificated mass.

16.12. Supersonic Aeroplanes

Supersonic aeroplanes - Application for Type Certificate submitted before 1 January 1975.

16.12.1.1.—(*a*) The requirements of 16.3 of this Part, with the exception of the maximum noise levels specified in 16.3.1.4, shall be applicable to all supersonic aeroplanes, including their derived versions, for which the application for the Type Certificate was submitted before 1 January 1975, and for which a certificate of airworthiness for the individual aeroplane was first issued after 26 November 1981.

(*b*) The maximum noise levels of those aeroplanes covered by 16.12.1.1(*a*), when determined in accordance with the noise evaluation method of Appendix 1 of ICAO Annex Volume I Part II, shall not exceed the measured noise levels of the first certificated aeroplane of the type.

16.12.1.2. Supersonic aeroplanes - Application for Type Certificate submitted on or after 1 January 1975—*Reserved.*

16.13. Tilt-Rotor Aircraft

Applicability.

16.13.1.1.—(*a*) The requirements of this Subpart shall be applicable to all tilt-rotors, including their derived versions, for which the application for a Type Certificate was submitted on or after 1 January 2018.

(*b*) Noise certification of tilt-rotors which are capable of carrying external loads or external equipment shall be made without such loads or equipment fitted.

Noise Evaluation Measure.

16.13.1.2.—(*a*) The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 2 of ICAO Annex Volume I Part II. The correction for spectral irregularities shall start at 50 Hz.

Noise measurement reference points.

16.13.1.3.—(*a*) A tilt-rotor, when tested in accordance with the reference procedures of 16.13.1. 6 and the test procedures of 16.13.1.7, shall not exceed the noise levels specified in 16.13.1.4 at the following reference points :

(1) *Take-off reference noise measurement points* :

(*i*) a flight path reference point located on the ground vertically below the flight path defined in the take-off reference procedure (see 16.13.1.6(*b*)) and 500 m (1,640 ft) horizontally in the direction of flight from the point at which transition to climbing flight is initiated in the reference procedure ;

(*ii*) two other points on the ground symmetrically disposed at 150 m (492 ft) on both sides of the flight path defined in the take-off reference procedure and lying on a line through the flight path reference point.

(2) *Overflight reference noise measurement points* :

(*i*) a flight path reference point located on the ground 150 m (492 ft) vertically below the flight path defined in the overflight reference procedure (see 16.13.1.6(*c*)) ;

(*ii*) two other points on the ground symmetrically disposed at 150 m (492 ft) on both sides of the flight path defined in the overflight reference procedure and lying on a line through the flight path reference point.

(3) *Approach reference noise measurement points* :

(*i*) a flight path reference point located on the ground 120 m (394 ft) vertically below the flight path defined in the approach reference procedure (see 16.13.1.6 (*d*)). On level ground, this corresponds to a position 1,140 m (3,740 ft) from the intersection of the 6.0° approach path with the ground plane ;

(*ii*) two other points on the ground symmetrically disposed at 150 m (492 ft) on both sides of the flight.

Maximum noise levels.

16.13.1.4.—(*a*) For tilt-rotors specified in 16.13.1.1, the maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 2 of ICAO Annex Volume I Part II for helicopters, shall not exceed the following :

(1) *For take-off* : 109 EPNdB for tilt-rotors in VTOL/conversion mode with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly with the logarithm of the tilt-rotormass at a rate of 3 EPNdB per halving of mass down to 89 EPNdB after which the limit is constant.

(2) *For overflight* : 108 EPNdB for tilt-rotors in VTOL/conversion mode with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly

with the logarithm of the tilt-rotor mass at a rate of 3 EPNdB per halving of mass down to 88 EPNdB after which the limit is constant.

NOTE 1.— For the tilt-rotor in aeroplane mode, there is no maximum noise level.

NOTE 2.— VTOL/conversion mode is all approved configurations and flight modes where the design operating rotor speed is that used for hover operations.

(3) *For approach* : 110 EPNdB for tilt-rotors in VTOL/conversion mode with maximum certificated take-off mass, at which the noise certification is requested, of 80,000 kg and over and decreasing linearly with the logarithm of the tilt-rotor mass at a rate of 3 EPNdB per halving of mass down to 90 EPNdB after which the limit is constant.

16.13.1.5.—(*a*) If the maximum noise levels are exceeded at one or two measurement points : Trade-Offs.

(1) the sum of excesses shall not be greater than 4 EPNdB ;

(2) any excess at any single point shall not be greater than 3 EPNdB ; and

(3) any excess shall be offset by corresponding reductions at the other point or points.

16.13.1.6.—(*a*) General conditions

Noise certification reference procedures.

(1) The reference procedures shall comply with the appropriate airworthiness requirements.

(2) The reference procedures and flight paths shall be approved by the certificating authority.

(3) Except in conditions specified in 16.13.1.6(*a*)(4), the take-off, overflight and approach reference procedures shall be those defined in 16.13.1.6(*b*), 16.13.1.6(*c*) and 16.13.1.6(*d*), respectively.

(4) When it is shown by the applicant that the design characteristics of the tilt-rotor would prevent a flight from being conducted in accordance with 13.6.2, 13.6.3 or 13.6.4, the reference procedures shall :

(*i*) depart from the reference procedures defined in 13.6.2, 13.6.3 or 13.6.4 only to the extent demanded by those design characteristics which make compliance with the reference procedures impossible ; and

(*ii*) be approved by the certificating authority.

(5) The reference procedures shall be established for the following reference atmospheric conditions :

(*i*) sea level atmospheric pressure of 1,013.25 hPa ;

(*ii*) ambient air temperature of 25°C, i.e. ISA + 10°C ;

(*iii*) relative humidity of 70 per cent ; and

(*iv*) zero wind.

(6) In 16.13.1.6(*b*)(4), 16.13.1.6(*c*)(4), and 16.13.1.6(*d*)(3), the maximum normal operating rpm shall be taken as the highest rotor speed for each reference procedure corresponding to the airworthiness limit imposed by the manufacturer and approved by the Authority. Where a tolerance on the highest rotor speed is specified, the maximum normal operating rotor speed shall be taken as the highest rotor speed about which that tolerance is given. If the rotor speed is automatically linked with the flight condition, the maximum normal operating rotor speed corresponding with the reference flight condition shall be used during the noise certification procedure. If the rotor speed can be changed by pilot action, the maximum normal operating rotor speed specified in the flight manual limitation section for the reference conditions shall be used during the noise certification procedure.

(*b*) Take-off reference procedure

The take-off reference flight procedure shall be established as follows :

(1) a constant take-off configuration, including nacelle angle, selected by the applicant shall be maintained throughout the take-off reference procedure ;

(2) the tilt-rotor shall be stabilized at the maximum take-off power corresponding to minimum installed engine(s) specification power available for the reference ambient conditions or gearbox torque limit, whichever is lower, and along a path starting from a point located 500 m (1,640 ft) prior to the flight path reference point, at 20 m (65 ft) above the ground ;

(3) the nacelle angle and the corresponding best rate of climb speed, or the lowest approved speed for the climb after take-off, whichever is the greater, shall be maintained throughout the take-off reference procedure ;

(4) the steady climb shall be made with the rotor speed stabilized at the maximum normal operating rpm certificated for take-off ;

(5) the mass of the tilt-rotor shall be the maximum take-off mass at which noise certification is requested ; and

(6) the reference take-off path is defined as a straight line segment inclined from the starting point (500 m (1,640 ft) prior to the centre noise measurement point and 20 m (65 ft) above ground level) at an angle defined by best rate of climb (BRC) and the best rate of climb speed corresponding to the selected nacelle angle and for minimum specification engine performance.

(*c*) Overflight reference procedure

(1) The overflight reference procedure shall be established as follows :

(*i*) the tilt-rotor shall be stabilized in level flight overhead the flight path reference point at a height of 150 m (492 ft) ;

(*ii*) a constant configuration selected by the applicant shall be maintained throughout the overflight reference procedures ;

(*iii*) the mass of the tilt-rotor shall be the maximum take-off mass at which noise certification is requested ;

(*iv*) in the VTOL/conversion mode, the nacelle angle at the authorized fixed operation point that is closest to the lowest nacelle angle certificated for zero airspeed, a speed of 0.9VCON and a rotor speed stabilized at the maximum normal operating rpm certificated for level flight shall be maintained throughout the overflight reference procedure ;

NOTE.— *For noise certification purposes, V_{CON} is defined as the maximum authorized speed for VTOL/conversion mode at a specific nacelle angle.*

(*v*) in the aeroplane mode, the nacelles shall be maintained on the down-stop throughout the overflight reference procedure, with :

(A) rotor speed stabilized at the rpm associated with the VTOL/ conversion mode and a speed of $0.9V_{CON}$; and

(B) rotor speed stabilized at the normal cruise rpm associated with the aeroplane mode and at the corresponding $0.9V_{MCP}$ or $0.9V_{MO}$, whichever is lesser, certificated for level flight.

NOTE.— *For noise certification purposes, V_{MCP} is defined as the maximum operating limit airspeed for aeroplane mode corresponding to minimum engine installed, maximum continuous power* (*MCP*) *available for sea level pressure* (1,013.25 *hPa*), 25°*C ambient conditions at the relevant maximum certificated mass; and VMO is the maximum operating* (*MO*) *limit airspeed that may not be deliberately exceeded.*

(2) The values of V_{CON} and V_{MCP} or V_{MO} used for noise certification shall be quoted in the approved flight manual.

(*d*) Approach reference procedure

The approach reference procedure shall be established as follows :

(1) the tilt-rotor shall be stabilized and follow a 6.0° approach path ;

(2) the approach shall be in an airworthiness approved configuration in which maximum noise occurs, at a stabilized airspeed equal to the best rate of climb speed corresponding to the nacelle angle, or the lowest approved airspeed for the approach, whichever is the greater, and with power stabilized during the approach and over the flight path reference point, and continued to a normal touchdown ;

(3) the approach shall be made with the rotor speed stabilized at the maximum normal operating rpm certificated for approach ;

(4) the constant approach configuration used in airworthiness certification tests, with the landing gear extended, shall be maintained throughout the approach reference procedure ; and

(5) the mass of the tilt-rotor at touchdown shall be the maximum landing mass at which noise certification is requested.

Test procedures.

16.13.1.7.—(*a*) The test procedures shall be acceptable to the Authority.

(*b*) The test procedures and noise measurements shall be conducted and processed in an approved manner to yield the noise evaluation measure designated in 16.13.1.2.

(*c*) Test conditions and procedures shall be similar to reference conditions and procedures or the acoustic data shall be adjusted, by the methods outlined in Appendix 2 of ICAO Annex Volume I Part II for helicopters, to the reference conditions and procedures specified in this Part.

(d) Adjustments for differences between test and reference flight procedures shall not exceed :

(1) *for take-off* : 4.0 EPNdB, of which the arithmetic sum of $\triangle_1$ and the term -7.5 log QK/QrKr from $\triangle_2$ shall not in total exceed 2.0 EPNdB ; and

(2) for overflight or approach: 2.0 EPNdB.

(*e*) During the test the average rotor rpm shall not vary from the normal maximum operating rpm by more than ±1.0 per cent throughout the 10 dB-down period.

(*f*) The airspeed of the tilt-rotor shall not vary from the reference airspeed appropriate to the flight demonstration by more than ±9 km/h (±5 kt) throughout the 10 dB-down period.

(*g*) The number of level overflights made with a headwind component shall be equal to the number of level overflights made with a tailwind component.

(*h*) The tilt-rotor shall fly within ±10° or ±20 m (±65 ft), whichever is greater, from the vertical above the reference track throughout the 10 dB-down period (see Figure 8-1).

(*i*) The height of the tilt-rotor shall not vary during overflight from the reference height throughout the 10 dB-down period by more than ±9 m (±30 ft).

(*j*) During the approach noise demonstration the tilt-rotor shall be established on a stabilized constant speed approach within the airspace contained between approach angles of 5.5° and 6.5° throughout the 10 dB-down period

(*k*) Tests shall be conducted at a tilt-rotor mass not less than 90 per cent of the relevant maximum certificated mass and may be conducted at a mass not exceeding 105 per cent of the relevant maximum certificated mass. For each of the flight conditions, at least one test must be completed at or above this maximum certificated mass.

16.14. SUBSONIC JET AEROPLANES AND PROPELLER-DRIVEN AEROPLANES WITH MAXIMUM CERTIFICATED TAKE-OFF MASS 55,000KG AND OVER—Application for Type Certificate submitted on or after 31 December 2017.

2.— SUBSONIC JET AEROPLANES WITH MAXIMUM CERTIFICATED TAKE-OFF MASS LESS THAN 55,000KG—Application for Type Certificate submitted on or after 31 December 2020.

3.— PROPELLER-DRIVEN AEROPLANES WITH MAXIMUM CERTIFICATED TAKE-OFF MASS OVER 8,618KG AND LESS THAN 55,000KG—Application for Type Certificate submitted on or after 31 December 2020.

Applicability.

16.14.1.1.—(*a*) The requirements of this Subpart shall, with the exception of those aeroplanes which require a runway length (with no stopway or clearway) of 610 m or less at maximum certificated mass for airworthiness or propeller-driven aeroplanes specifically designed and used for agricultural or firefighting purposes, be applicable to :

(1) all subsonic jet aeroplanes and propeller-driven aeroplanes, including their derived versions, with a maximum certificated take-off mass of 55,000 kg and over for which the application for a Type Certificate was submitted on or after 31 December 2017 ;

(2) all subsonic jet aeroplanes, including their derived versions, with a maximum certificated take-off mass of less than 55,000 kg for which the application for a Type Certificate was submitted on or after 31 December 2020 ;

(3) all propeller-driven aeroplanes, including their derived versions, with a maximum certificated take-off mass of over 8,618 kg and less than 55,000 kg for which the application for a Type Certificate was submitted on or after 31 December 2020 ; and

(4) all subsonic jet aeroplanes and all propeller-driven aeroplanes certificated originally as satisfying Annex 16, Volume I, 16.3, 16.4 or 16.5, for which recertification to 16.14 is requested.

(*b*) Notwithstanding 16.14.1.1, it may be recognized by a Contracting State that the following situations for jet aeroplanes and propeller-driven aeroplanes over 8 618 kg maximum certificated take-off mass on its registry do not require demonstration of compliance with the provisions of the Standards of ICAO Annex 16, Volume I :

(1) gear down flight with one or more retractable landing gear down during the entire flight ;

(2) spare engine and nacelle carriage external to the skin of the aeroplane (and return of the pylon or other external mount) ; and

(3) time-limited engine and/or nacelle changes, where the change in type design specifies that the aeroplane may not be operated for a period of more than 90 days unless compliance with the provisions of Annex 16, Volume I, is shown for that change in type design. This applies only to changes resulting from a required maintenance action.

Noise Measure-ments.

16.14.1.2. The noise evaluation measure shall be the effective perceived noise level in EPNdB as described in Appendix 2 of ICAO Annex Volume I Part II.

Reference Noise Measurement Points.

16.14.1.3.—(*a*) An aeroplane, when tested in accordance with these Standards, shall not exceed the maximum noise level specified in 14.4 of the noise measured at the points specified in Chapter 3, 3.3.1(*a*), (*b*) and (*c*).

(*b*) Test noise measurement points

The provisions of Chapter 3, 3.3.2, relating to test noise measurement points shall apply.

Maximum Noise Levels.

16.14.1.4.—(*a*) The maximum noise levels, when determined in accordance with the noise evaluation method of Appendix 2 of ICAO Annex Volume I Part II, shall not exceed the following :

(1) *At the lateral full-power reference noise measurement point*

103 EPNdB for aeroplanes with maximum certificated take-off mass, at which the noise certification is requested, of 400,000 kg and over, decreasing linearly with the logarithm of the mass down to 94 EPNdB at 35,000 kg, after which the limit is constant to 8,618 kg, where it decreases linearly with the logarithm of the mass down to 88.6 EPNdB at 2 000 kg, after which the limit is constant.

(2) *At the flyover reference noise measurement point*

(*i*) *Aeroplanes with two engines or less*

101 EPNdB for aeroplanes with maximum certificated take-off mass, at which the noise certification is requested, of 385,000 kg and over, decreasing linearly with the logarithm of the mass at the rate of 4 EPNdB per halving of mass down to 89 EPNdB, after which the limit is constant to 8,618 kg, where it decreases linearly with the logarithm of the mass at a rate of 4 EPNdB per halving of mass down to 2,000 kg, after which the limit is constant.

(*ii*) *Aeroplanes with three engines*

As (*a*) but with 104 EPNdB for aeroplanes with maximum certificated take-off mass of 385,000 kg and over.

(*iii*) *Aeroplanes with four engines or more*

As (*a*) but with 106 EPNdB for aeroplanes with maximum certificated take-off mass of 385 000 kg and over.

(3) *At the approach reference noise measurement point*

105 EPNdB for aeroplanes with maximum certificated take-off mass, at which the noise certification is requested, of 280,000 kg and over, decreasing linearly with the logarithm of the mass down to 98 EPNdB at 35,000 kg, after which the limit is constant to 8,618 kg, where it decreases linearly with the logarithm of the mass down to 93.1 EPNdB at 2 000 kg, after which the limit is constant.

(4) The sum of the differences at all three measurement points between the maximum noise levels and the maximum permitted noise levels specified in 16.14.1.4 (*a*)(1)(2) and (3), shall not be less than 17 EPNdB.

(5) The maximum noise level at each of the three measurement points shall not be less than 1 EPNdB below the corresponding maximum permitted noise level specified in 16.14.1.4 (*a*)(1)(2) and (3).

16.14.1.5. NOISE CERTIFICATION REFERENCE PROCEDURES

The noise certification reference procedures shall be as specified in 16.3, 16.3.1.6.

16.14.1.6. TEST PROCEDURES

The test procedures shall be as specified in 16.3, 16.3.1.7.

16.14.1.7. RECERTIFICATION

For aeroplanes specified in 16.14.1.1 (*a*)(4), recertification shall be granted on the basis that the evidence used to determine compliance with 16.14 is as satisfactory as the evidence associated with aeroplanes specified in 16.14.1.1 (*a*)(1)(2) and (3).

16.15. NOISE MEASUREMENT FOR MONITORING PURPOSES

16.15.1.1. Where the measurement of aircraft noise is made for monitoring purposes, the method of Appendix 5 of ICAO Annex 16 Volume I Part II shall be used.

16.16. ASSESSMENT OF AIRPORT NOISE

16.16.1.1. Where international comparison of noise assessment around airports is undertaken, the methodology described in Recommended Method for Computing Noise Contours around Airports (Doc 9911) shall be used.

16.17. BALANCED APPROACH TO NOISE MANAGEMENT

16.17.1.1. The balanced approach to noise management consists of identifying the noise problem at an airport and then analyzing the various measures available to reduce noise through the exploration of four principal elements, namely reduction at source (addressed in subpart of this subparts), land-use planning and management, noise abatement operational procedures and operating restrictions, with the goal of addressing the noise problem in the most cost-effective manner. All the elements of the balanced approach are addressed in the Guidance on the Balanced Approach to Aircraft Noise Management (Doc 9829).

16.17.1.2. Aircraft operating procedures for noise abatement shall not be introduced unless the regulatory authority, based on appropriate studies and consultation, determines that a noise problem exists.

16.17.1.3. Aircraft operating procedures for noise abatement shall be developed in consultation with the operators that use the aerodrome concerned.

16.17.1.4. The factors to be taken into consideration in the development of appropriate aircraft operating procedures for noise abatement should include the following :

(*a*) the nature and extent of the noise problem including :

(1) the location of noise-sensitive areas ; and

(2) critical hours ;

(*b*) the types of aircraft affected, including aircraft mass, aerodrome elevation, temperature considerations ;

(*c*) the types of procedures likely to be most effective ;

(*d*) obstacle clearances (PANS-OPS (Doc 8168), Volumes I and II) ; and

(*e*) human performance in the application of the operating procedures.

16.17.1.5. Although in most countries, land-use planning and management are the responsibility of national and/or local planning authorities rather than aviation authorities, ICAO has developed guidance material which shall be used to assist planning authorities in taking appropriate measures to ensure compatible land-use management around airports to the benefit of both the airport and the surrounding communities (Airport Planning Manual, Part 2, (Doc 9184)).

16.18. VENTED FUEL ADMINISTRATION

Applicability.

16.18.1.1.—(*a*) The provision of this subpart shall apply to all turbine engine powered aircraft intended for operation in international air navigation manufactured after 18 February 1982.

Administration.

16.18.1.2.—(*a*) Certification related to the prevention of intentional fuel venting shall be granted by the Authority on the basis of satisfactory evidence that either the aircraft or the aircraft engines comply with requirements of 16.18.1.3.

(*b*) The Authority shall recognize as valid a certification relating to fuel venting granted by the certificating authority of another Contracting State provided the requirements under which such certification was granted are not less stringent than the provision of ICAO Annex 16 Volume II.

16.18.2. Prevention of Intentional Fuel Venting

16.18.2.1. Aircraft shall be so designed and constructed as to prevent the intentional discharge into the atmosphere of liquid fuel from the fuel nozzle manifolds resulting from the process of engine shutdown following normal flight or ground operations.

16.19. Emissions Certification

16.19.1. Emission Certificate and Administration

16.19.1.1.—(*a*) The provisions of 16.19.1.2 to 16.19.1.4 shall apply to all engines included in the classifications defined for emission certification purposes in subparts16.18.2 and 16.18.3 where such engines are fitted to aircraft engaged in international air navigation. Applicability.

16.19.1.2.—(*a*) Emissions certification shall be granted by the authority on the basis of satisfactory evidence that the engine complies with requirements which are at least equal to the stringency of the provisions of this subpart. Compliance with the emissions levels of subpart 16.18. 2 and 16.18.3 shall be demonstrated using the procedure described in Appendix 6 of ICAO Annex 16 Volume II. Emission Administration.

(*b*) The emissions certificate for each individual engine shall include at least the following information which is applicable to the engine type :

(1) name of Authority ;

(2) manufacturers type and model designation ;

(3) statement of any additional modifications incorporated for the purpose of compliance with the applicable emissions certification requirements ;

(4) rated thrust ;

(5) reference pressure ratio ;

(6) a statement indicating compliance with Smoke Number requirements ;

(7) a statement indicating compliance with gaseous pollutant requirements.

(*a*) The items on the emissions certificate shall be uniformly numbered in Arabic/Roman numerals as contained in IS16.19.1.2(*b*).

(*c*) The Authority shall recognize as valid emissions certificate granted by the certificating authority of another Contracting State provided that the requirements under which such certification was granted are not less stringent than the provisions of this subpart.

16.19.2. TURBOJET AND TURBOFAN ENGINES INTENDED FOR PROPULSION ONLY AT SUBSONIC SPEEDS

Applicability.

16.19.2.1.—(*a*) The provisions of this chapter shall apply to all turbojet and turbofan engines, as further specified in 16.18.3 and 16.18.4, intended for propulsion only at subsonic speeds, except when certificating authorities make exemptions for :

(1) specific engine types and derivative versions of such engines for which the type certificate of the first basic type was issued or other equivalent prescribed procedure was carried out before 1 January 1965 ; and

(2) a limited number of engines beyond the dates of applicability specified in 16.19.3 and 16.18.4 for the manufacture of the individual engine.

(*b*) In such cases, an exemption document shall be issued by the authority, the identification plates on the engines shall be marked "EXEMPT", and the grant of exemption shall be noted in the permanent engine record.

(*c*) The provisions of this chapter shall also apply to engines designed for applications that otherwise would have been fulfilled by turbojet and turbofan engines.

Emissions involved.

16.19.2.2.—(*a*) The following emissions shall be controlled for certification of aircraft engines :

Smoke

Gaseous emissions

Unburned hydrocarbons	(HC) ;
Carbon monoxide	(CO) ; and
Oxides of nitrogen	(NOx).

Units of measurement.

16.19.2.3.—(*a*) The smoke emission shall be measured and reported in terms of Smoke Number (SN).

(*b*) The mass (D_p) of the gaseous pollutant HC, CO, or NO_x emitted during the reference emissions landing and take-off (LTO) cycle, defined in 16.19.2.1.4(*b*) and 16.19. 2.4(*c*), shall be measured and reported in grams.

Reference conditions.

16.19.2.4.—(*a*) *Atmospheric conditions*

(1) The reference atmospheric conditions shall be ISA at sea level except that the reference absolute humidity shall be 0.00634kg water/kg dry air.

(*b*) *Thrust settings*

The engine shall be tested at sufficient thrust settings to define the gaseous and smoke emissions of the engine so that mass emission rates and Smoke Numbers can be determined at the following specific percentages of rated thrust as agreed by the certificating authority :

LTO operating mode	*Thrust setting*
Take-off	100 per cent F_{oo}
Climb	85 per cent F_{oo}
Approach	30 per cent F_{oo}
Taxi/ground idle	7 per cent F_{oo}

(*c*) *Reference emissions landing and take-off (LTO) cycle*

(1) The reference emissions LTO cycle for the calculation and reporting of gaseous emissions shall be represented by the following time in each operating mode.

Phase	*Time in operating mode, minutes*
Take-off	0.7
Climb	2.2
Approach	4.0
Taxi/ground idle	26.0

(*d*) Fuel specifications

The fuel used during tests shall meet the specifications of Appendix 4 of ICAO Annex 16 Volume II, unless a deviation and any necessary corrections have been agreed by the certificating authority. Additives used for the purpose of smoke suppression (such as organo-metallic compounds) shall not be present.

16.19.2.5.—(*a*) The tests shall be made with the engine on its test bed. Test conditions.

(*b*) The engine shall be representative of the certificated configuration (see Appendix 6 of ICAO Annex 16 Volume II); off-take bleeds and accessory loads other than those necessary for the engine's basic operation shall not be simulated.

(*c*) When test conditions differ from the reference atmospheric conditions in 16.19.2.4, the gaseous emissions test results shall be corrected to the reference atmospheric conditions by the methods given in Appendix 3 of ICAO Annex 16 Volume II.

16.19.2.6.—(*a*) Applicability Smoke.

The provisions of 16.19.3.2 shall apply to engines whose date of manufacture is on or after 1 January 1983.

(*b*) Regulatory Smoke Number

The Smoke Number at any of the four LTO operating mode thrust settings when measured and computed in accordance with the procedures of Appendix 2 of ICAO Annex 16 Volume II and converted to a characteristic level by the procedures of Appendix 6 of ICAO Annex 16 Volume II shall not exceed the level determined from the following formula :

Regulatory Smoke Number = 83.6 $(F_{oo})^{-0.274}$
or a value of 50, whichever is lower

Gaseous emissions.

16.19.2.7.—(*a*) Applicability

The provisions of 16.19.2.3.2 shall apply to engines whose rated thrust is greater than 26.7 kN and whose date of manufacture is on or after 1 January 1986 and as further specified for oxides of nitrogen.

(*b*) Regulatory levels

Gaseous emission levels when measured and computed in accordance with the procedures of Appendix 3 of ICAO Annex 16 Volume II and converted to characteristic levels by the procedures of Appendix 6 shall not exceed the regulatory levels determined from the following formulas :

Hydrocarbons (HC) : $D_p / F_{oo} = 19.6$

Carbon monoxide (CO) : $D_p / F_{oo} = 118$

Oxides of nitrogen (NO_x) :

(1) for engines of a type or model for which the date of manufacture of the first individual production model was on or before 31 December 1995 and for which the date of manufacture of the individual engine was on or before 31 December 1999.

$D_p / F_{oo} = 40 + 2\mathrm{TT}_{oo}$

(2) for engines of a type or model for which the date of manufacture of the first individual production model was after 31 December 1995 or for which the date of manufacture of the individual engine was after 31 December 1999.

$D_p / F_{oo} = 32 + 1.6\mathrm{TT}_{oo}$

(3) for engines of a type or model for which the date of manufacture of the first individual production model was after 31 December 2003 :

(*i*) for engines with a pressure ratio of 30 or less :

(*a*) for engines with a maximum rated thrust of more than 89.0 kN:

$$D_p / F_{oo} = 19 + 1.6\mathrm{TT}_{oo}$$

(*b*) for engines with a maximum rated thrust of more than 26.7 kN but not more than 89.0 kN :

$$D_p / F_{oo} = 37.572 + 1.6\mathrm{TT}_{oo} — 0.2087F_{oo}$$

(*ii*) for engines with a pressure ratio of more than 30 but less than 62.5 :

(*a*) for engines with a maximum rated thrust of more than 89.0 kN :

$$D_p / F_{oo} = 7 + 2.0\mathrm{TT}_{oo}$$

(*b*) for engines with a maximum rated thrust of more than 26.7 kN but not more than 89.0 kN :

$$D_p / F_{oo} = 46.1600 + (1.4286 * \mathrm{TT}_{oo}) — (0.5303 * F_{oo}) + (0.00642 * \mathrm{TT}_{oo} * F_{oo})$$

(*c*) for engines with a pressure ratio of 82.6 or more :

$$D_p / F_{oo} = 32 + (1.6 * \mathrm{TT}_{oo})$$

16.19.2.8.—(*a*) General information — Information Required.

The following information shall be provided for each engine type for which emissions certification is sought :

(1) engine identification ;

(2) rated thrust (in kilonewtons) ;

(3) reference pressure ratio ;

(4) fuel specification reference ;

(5) fuel hydrogen/carbon ratio ;

(6) the methods of data acquisition ;

(7) the method of making corrections for ambient conditions ; and

(8) the method of data analysis.

(*b*) Test information

The following information shall be provided for each engine tested for certification purposes at each of the thrust settings specified in 16.19.2.4.(b). The information shall be provided after correction to the reference ambient conditions where applicable :

(1) fuel flow (kilograms/second) ;

(2) emission index (grams/kilogram) for each gaseous pollutant ; and

(3) measured Smoke Number.

(*c*) Derived information

(1) The following derived information shall be provided for each engine tested for certification purposes :

(*i*) emission rate, i.e. emission index × fuel flow, (grams/second) for each gaseous pollutant ;

(*ii*) total gross emission of each gaseous pollutant measured over the LTO cycle (grams) ;

(*iii*) values of D_p / F_{oo} for each gaseous pollutant (grams/kilonewton) ; and (*iv*) maximum Smoke Number.

(2) The characteristic Smoke Number and gaseous pollutant emission levels shall be provided for each engine type for which emissions certification is sought.

16.19.3. TURBOJET AND TURBOFAN ENGINES INTENDED FOR PROPULSION AT SUPERSONIC SPEEDS

Applicability.

16.19.3.1. The provisions of this subpart shall apply to all turbojet and turbofan engines intended for propulsion at supersonic speeds whose date of manufacture is on or after 18 February 1982.

Emissions involved.

16.19.3.2. The following emissions shall be controlled for certification of aircraft engines :

Smoke

Gaseous emissions

Unburned hydrocarbons (HC)

Units of measurement.

16.19.3.3.—(*a*) The smoke emission shall be measured and reported in terms of Smoke Number (SN).

(*b*) The mass (D_p) of the gaseous pollutants HC, CO, or NO_x emitted during the reference emissions landing and take-off (LTO) cycle, defined in 16.19.3.1.5.(*a*) and 16.19.3.1.5.(*b*) shall be measured and reported in grams.

Nomenclature.

16.19.3.4. Throughout this chapter, where the expression F^*_{oo} is used, it shall be replaced by F_{oo} for engines which do not employ afterburning. For taxi/ground idle thrust setting, F_{oo} shall be used in all cases.

Reference conditions.

16.19.3.5.—(*a*) Atmospheric conditions

The reference atmospheric conditions shall be ISA at sea level except that the reference absolute humidity shall be 0.00634 kg water/kg dry air.

(*b*) Thrust settings

The engine shall be tested at sufficient power settings to define the gaseous and smoke emissions of the engine so that mass emission rates and Smoke Numbers corrected to the reference ambient conditions can be determined at the following specific percentages of rated output as agreed by the Authority.

Operating mode	*Thrust setting*
Take-off	100 per cent F^*_{oo}
Climb	65 per cent F^*_{oo}
Descent	15 per cent F^*_{oo}
Approach	34 per cent F^*_{oo}
Taxi/ground idle	5.8 per cent F_{oo}

(*c*) *Reference emissions landing and take-off* (*LTO*) *cycle*

The reference emissions LTO cycle for the calculation and reporting of gaseous emissions shall be represented by the following time in each operating mode.

Phase	*Time in operating mode, minutes*
Take-off	1.2
Climb	2.0
Descent	1.2
Approach	2.3
Taxi/ground idle	26.0

(*d*) Fuel specifications

The fuel used during tests shall meet the specifications of Appendix 4 of ICAO Annex 16 Volume II. Additives used for the purpose of smoke suppression (such as organo-metallic compounds) shall not be present.

16.19.3.6.—(*a*) The tests shall be made with the engine on its test bed. Test conditions.

(*b*) The engine shall be representative of the certificated configuration (see Appendix 6 of ICAO Annex 16 Volume II) ; off-take bleeds and accessory loads other than those necessary for the engine's basic operation shall not be simulated.

(*c*) Measurements made for determination of emission levels at the thrusts specified in 1618.3.5(*b*) shall be made with the afterburner operating at the level normally used, as applicable.

(*d*) When test conditions differ from the reference conditions in 16.19.3.5, the test results shall be corrected to the reference conditions by the methods.

16.19.3.7.—(*a*) Regulatory Smoke Number Smoke.

The Smoke Number at any thrust setting when measured and computed in accordance with the procedures of Appendix 2 of ICAO Annex 16 Volume II and converted to a characteristic level by the procedures of Appendix 6 of ICAO Annex 16 Volume II shall not exceed the regulatory level determined from the following formula :

Regulatory Smoke Number = 83.6 $(F^{*}_{oo})^{-0.274}$
or a value of 50, whichever is lower

16.19.3.8.—(*a*) Regulatory levels Gaseous emissions.

Gaseous emission levels when measured and computed in accordance with the procedures of Appendix 3 of ICAO Annex 16 Volume II or Appendix 5, of ICAO Annex 16 Volume II as applicable, and converted to characteristic levels by the procedures of Appendix 6 of ICAO Annex 16 Volume II shall not exceed the regulatory levels determined from the following formulas :

Hydrocarbons (HC) : $D_p / F^*_{oo} = 140(0.92)\mathrm{TT}_{oo}$

Carbon monoxide (CO) : $D_p / F^*_{oo} = 4{,}500(\mathrm{TT}_{oo})^{-1.03}$

Oxides of nitrogen (NO_x) : $D_p / F^*_{oo} = 36 + 2.42\mathrm{TT}_{oo}$

Information required.

16.19.3.9.—(*a*) General Information

The following information shall be provided for each engine type for which emissions certification is sought :

(1) engine identification ;

(2) rated output (in kilonewtons) ;

(3) rated output with afterburning applied, if applicable (in kilonewtons) ;

(4) reference pressure ratio ;

(5) fuel specification reference ;

(6) fuel hydrogen/carbon ratio ;

(7) the methods of data acquisition ;

(*b*) Test information

The following information shall be provided for each engine tested for certification purposes at each of the thrust settings specified in 16.18.3.5(b). The information shall be provided after correction to the reference ambient conditions where applicable :

(1) fuel flow (kilograms/second) ;

(2) emission index (grams/kilogram) for each gaseous pollutant ;

(3) percentage of thrust contributed by afterburning ; and

(4) measured Smoke Number.

(*c*) Derived information

(1) The following derived information shall be provided for each engine tested for certification purposes :

(*i*) emission rate, i.e. emission index × fuel flow, (grams/second), for each gaseous pollutant ;

(*ii*) total gross emission of each gaseous pollutant measured over the LTO cycle (grams) ;

(*iii*) values of D_p /F^*_{oo} for each gaseous pollutant (grams/kilonewton) ; and (*iv*) maximum Smoke Number.

(2) The characteristic Smoke Number and gaseous pollutant emission levels shall be provided for each engine type for which emissions certification is sought.

PART 16—IMPLEMENTING STANDARDS

IS : 16.1.2.5

1. FEDERAL REPUBLIC OF NIGERIA

2. NOISE CERTIFICATE

3. CERT NO.

4. NATIONALITY AND REGISTRATION MARKS

5. MANUFACTURER AND MANUFACTURER'S DESIGNATION OF AIRCRAFT

6. AIRCRAFT SERIAL NUMBER

7. ENGINE MANUFACTURER, TYPE AND MODEL

8. PROPELLER MANUFACTURER, TYPE AND MODEL

9. MAXIMUM TAKEOFF MASS (KG)

10. MAXIMUM LANDING MASS (KG)

11. NOISE CERTIFICATION STANDARD.

12. ADDITIONAL MODIFICATIONS INCORPORATED FOR THE PURPOSE OF COMPLIANCE WITH THE APPLICABLE NOISE CERTIFICATION STANDARDS:

13. LATERAL/FULL POWER NOISE LEVEL

14. APPROACH NOISE LEVEL

15. FLYOVER NOISE LEVEL

16. OVERFLIGHT NOISE LEVEL

17. TAKEOFF NOISE LEVEL

18. THIS NOISE CERTIFICATE IS ISSUED PURSUANT TO VOLUME I OF ANNEX 16 TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION AND PART 16 OF THE NIGERIA CIVIL AVIATION SUBPARTS, IN RESPECT OF THE ABOVE-MENTIONED AIRCRAFT, WHICH IS CONSIDERED TO COMPLY WITH THE INDICATED NOISE STANDARD WHEN MAINTAINED AND OPERATED IN ACCORDANCE WITH THE RELEVANT REQUIREMENTS AND OPERATING LIMITATIONS.

REMARKS

19. DATE OF ISSUE 20. SIGNATURE:

1. This Certificate must be carried on board the aircraft

2. This Certificate is not transferable

IS 16.19.1.2(*b*)

1. FEDERAL REPUBLIC OF NIGERIA	
2. EMISSION CERTIFICATE	
3. CERT NO.	
4. ENGINE MANUFACTURER, TYPE AND MODEL	5. ENGINE SERIAL NUMBER
6. Rated thrust:	7. Reference pressure ratio:
8. A statement of any additional modifications incorporated for the purpose of compliance with the applicable emissions certification requirements:	
9. A statement indicating compliance with Smoke Number requirements:	
10. A statement indicating compliance with gaseous pollutant requirements:	

11. REMARKS

12. DATE OF ISSUE 13. SIGNATURE:

1. This Certificate must be carried on board the aircraft
2. This Certificate is not transferable

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NIGERIA CIVIL AVIATION REGULATIONS

PART 17—AVIATION SECURITY

INTRODUCTION

Part 17 deals with aviation security programmes, measures, processes, procedures and practices aimed at safeguarding civil aviation against acts of unlawful interference. In addition, Part 17 incorporates the Standards and Recommended Practices (SARPs) as contained in Annex 17 to the Chicago Convention.

Part 17 makes provision for designation of Authority, National Civil Aviation Security Programmes, Aerodrome Security, Aircraft Operator Security, Cargo and Regulated Agent Security, Flight Catering Operator Security, Tenant Restricted Area Security, Quality Control and Miscellaneous Matters.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 17—AVIATION SECURITY

ARRANGEMENT OF REGULATIONS

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17.33. Amendment of Approved Security Programme by the Authority.
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17.35. Aerodrome Security Committee.
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17.55. Keeping Aerodrome Maps and Plans.
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17.59. Prevention and Management of Hijackings and Sabotage Attempts.
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17.62. Security Threats and Procedures.
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17.64. Person Authorized to Conduct Screening Activities.
17.65. Security Information.
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S. I. No. 36 of 2015

NIGERIA CIVIL AVIATION REGULATIONS

PART 17—AVIATION SECURITY

17.1.—These Regulations shall apply to : Applicability.

(*a*) international airport operators ;

(*b*) domestic airports operators and any other aerodrome operator certified by the Authority ;

(*c*) national aircraft operators ;

(*d*) foreign aircraft operators ;

(*e*) aerodrome tenants and/or operators of Tenant Restricted Areas at International air ports or Domestic airports ;

(*f*) any person in or within the vicinity of an international airport or domestic airport, or any other aerodrome specified by the Authority ;

(*g*) any person who offers goods for transport by air ;

(*h*) any person who provides a service to an air craft operator ;

(*i*) any person on board an aircraft ;

(*j*) any organization or agency who provides air traffic services ; and

(*k*) remotely Piloted Aircraft (RPA) operator.

17.2—(*a*) For the purpose of this Part the following definitions shall apply : Definitions.

(1) "*Acts of unlawful interference*". These are acts or attempted acts such as to jeopardize the safety of civil aviation including but not limited to :

(*i*) unlawful seizure of an aircraft ;

(*ii*) destruction of an aircraft in service ;

(*iii*) hostage-taking on board an aircraft or on aerodromes ;

(*iv*) forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility ;

(*v*) introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes ;

(*vi*) Use of an aircraft in service for the purpose of causing death, serious bodily injury, or serious damage to property or the environment ; or

(*vii*) communication of false information such as to jeopardize the safety of aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility ;

(2) "*Aerial Work*" means an aircraft operation in which an aircraft isused for specialized services such as agriculture, construction, photography, surveying observation and patrol, search and rescue, aerial advertisement, etc. ;

(3) "*Aerodrome*" means a defined area of land on land or water (including any buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft ;

(4) "*Aerodrome Operator*" means the holder of an aerodrome license, issued under Part12 of these Regulations ;

(5) "*Aerodrome or Airport Tenant*" means any enterprise that is resident at an aerodrome and offers services and products at that aerodrome ;

(6) "*Aircraft Operator*" means a national aircraft operator and a foreign aircraft operator ;

(7) "*Aircraft Security Check*" means an inspection of the interior of an aircraft to which passengers may have had access and an inspection of the hold for the purposes of discovering suspicious objects,weapons explosives or other dangerous devices ;

(8) "*Aircraft Security Search*" means a thorough inspection of the interior and exterior of the aircraft for the purpose of discovering suspicious objects, weapons, explosives or other dangerous devices, articles or substances ;

(9) "*Airside*" means the movement area of an airport, adjacent terrain and buildings or portions thereof, access to which is controlled ;

(10) "*Authority*" means the Nigerian Civil Aviation Authority (NCAA), as specified to ICAO as the body responsible for the co-ordination of the development implementation, and maintenance of the National Civil Aviation Security Programme ;

(11) "*Audit*" shall mean any procedure or process used for compliance monitoring undertaken at national level. It covers security audits, inspections, surveys, tests and investigations ;

(12) "*Auditor*" shall mean any person conducting audits at national level ;

(13) "*Aviation Security Officer*" means :

(*a*) a person who is trained in accordance with the security training requirements of the appropriate approved Airport Security Programme and who has been appointed as an aviation security officer by an aerodrome operator, aircraft operator or aerodrome tenant ; and

(*b*) any member of the (Police and/or Military) when assigned aerodrome security duties ;

(14) "*Aviation Security Screening Officer*" means a person who by virtue of his training has been employed by the aerodrome operator, aircraft operator, or aerodrome tenant to carry out aviation security screening duties, and who has been certified as such by the Authority ;

(15) "*Background Check*" means a check of a person's identity and previous experience, including where legally permissible, any criminal history, as part of the assessment of an individual's suitability to implement a security control and/or for unescorted access to a security restricted area ;

(16) "*Cargo*" means any property carried on an aircraft other than mail, stores and accompanied or mishandled baggage ;

(17) "*Carry-on Baggage*" means luggage and personal belongings to which a person will have access while on board an aircraft ;

(18) "*Catering Stores*" means all items, other than catering supplies, associated with passenger in-flight services, that includes newspapers, magazines, headphones, audio and video tapes, pillows and blankets, amenity kits ;

(19) "*Catering Supplies*" means food, beverages, other dry stores and associated equipment used on board an aircraft ;

(20) "*Certification*" A formal evaluation and confirmation by or on behalf of the Authority for aviation security that a person possesses the necessary competencies to perform assigned functions to an acceptable level as defined by the Authority ;

(21) "*Checked Baggage*" means luggage and personal belongings accepted for transportation by an aircraft operator which is loaded into the hold of the aircraft, and to which a person will not have access while on board an aircraft ;

(22) "*Commercial Air Transport Operation*" means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire ;

(23) "*Corporate Aviation*" means the non commercial operation or use of an aircraft by a company for the carriage of passengers and or goods as an aid to the conduct of company business, flown by a professional pilot employed to fly the aircraft ;

(24) "*Dangerous Goods*" means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the ICAO Technical Instructions or which are classified according to those instructions ;

(25) "*Deficiency*" shall mean failure to comply with aviation security requirements ;

(26) "*Director-General*" means the Director-General of the Nigerian Civil Aviation Authority (NCAA) ;

(27) "*Disruptive passenger"* A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at an airport or on board the aircraft ;

(28) "*Domestic Airport*" means any aerodrome other than (*a*), with scheduled and non-scheduled domestic services offered by national carriers and general aviation traffic, whereby, the Standards and Recommended Practices of Annex 17 to the Convention on Civil Aviation shall apply ;

(29) "*Enhanced Security Restricted Area*" means those areas of the air side of an airport which are identified as priority risk areas where in addition to access control, the screening of persons and any items they may have in their possession are conducted ;

(30) "*Escort*" means to accompany or supervise an individual who does not have unescorted access to areas restricted for security purposes, as identified in the Airport or Aerodrome Operator Security Programme ;

(31) "*Firearm*" has the meaning given to it in appropriate Nigerian legislation ;

(32) "*Foreign Air Operator*" means an aircraft operator who conducts international air transport operations under the terms of an air operator certificate issued by a State other than Nigeria ;

(33) "*Flight Catering Operator*" means any enterprise that provides catering supplies for consumption on board an aircraft in flight engaged in the carriage of passengers ;

(34) "*General Aviation*" means an aircraft operation other than a commercial air transport operation or an aerial work operation ;

(35) "*Goods*" means personal belongings, baggage, cargo, mail, article, thing or conveyance that may be taken or placed on board an aircraft or taken into are stricted area ;

(36) "*Heliport*" means an aerodrome or a defined area on a structure intended to used wholly or in part for the arrival, departure and surface movements of helicopters ;

(37) "*High-risk cargo or mail*" Cargo or mail presented by an unknown entity or showing signs of tampering shall be considered high risk if, in addition, it meets one of the following criteria ;

(*a*) specific intelligence indicates that the cargo or mail poses a threat to civil aviation ; or

(*b*) the cargo or mail shows anomalies that give rise to suspicion ; or

(*c*) the nature of the cargo or mail is such that baseline security measures alone are unlikely to detect prohibited items that could endanger the aircraft—

Regardless of whether the cargo or mail comes from a known or unknown entity, a State's specific intelligence about a consignment may render it as high risk.

(38) "*Hijacking*" has the meaning given to it under Civil Aviation Act 2006 ;

(39) "*Human Factors principles*" Principles which apply to design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance ;

(40) "*Human performance*" Human capabilities and limitations which have an impact on the safety, security and efficiency of aeronautical operations ;

(41) "*Incendiary Device*" means an object, other than a match or pocket lighter, that is fabricated with combustible materials and when ignited may cause fire damage to property or inflict burn injuries on individuals ;

(42) "*In-flight Security Officer*" A person who is authorized by the Government of the State of the Operator and the government of the State of Registration to be deployed on an aircraft with the purpose of protecting that aircraft and its occupants against acts of unlawful interference. This excludes persons employed to provide exclusive personal protection for one or more specific people travelling on the aircraft, such as personal body guards ;

(43) "*International Airport*" means any aerodrome with scheduled international services offered by national and foreign aircraft operators ;

(44) "*Investigation*" shall mean an examination of a security incident and an explanation of its cause in order to avoid recurrence and to consider legal action ;

(45) "*Known Consignor*" A consign or who originates cargo or mail for its own account and whose procedures meet common security rules and standards sufficient to allow the carriage of cargo or mail on any aircraft ;

(46) "*Loaded Firearm*" means a fire arm which has inserted initalive round of ammunition, cartridge in the chamber or in a clip, magazine or cylinder ;

(47) "*Minister*" means the Honourable Minister for Aviation ;

(48) "*National Aircraft Operator*" means an aircraft operator operating under the authority of an air operators certificate issued by the Nigerian Civil Aviation Authority ;

(49) "*Person in Custody*" means a person who is for the time being under the control of a law enforcement officer ;

(50) "*Personal Search*" means a search of the clothing of a person and personal belongings for prohibited items by a designated aviation security officer, an aviation security screening officer or a member of the Nigerian Police ;

(51) "*Quality Control Programme*" shall mean the national civil aviation security quality control programme ;

(52) "*Record*" includes any writing, drawing, map, tape, film, photograph, or other means by which information is preserved ;

(53) "*Regulated Agent*" means an agent, freight forwarder or any other entity who conducts business with an aircraft operator and provides security controls that are accepted or authorized by the Authority in respect of cargo, courier and express parcels or mail ;

(54) "*Restricted Area*" means any area of an aerodrome that is identifies as an area to which access is restricted to authorized persons ;

(55) "*Restricted Area Permit*"means a document issued by the designated airport permit issuing authority, that entitles the holder to have access to a specific restricted area of an aerodrome during a specified period ;

(56) "*Screening*" means the application of technical or other means which are intended to detect weapons, explosives or other prohibited items which have been designated as dangerous to aviation security ;

(57) "*Screening Staff*" includes an aviation security screening officer ;

(58) "*Security*" Safeguarding civil aviation against acts of unlawful interference. This objective is achieved by a combination of measures and human and material resources ;

(59) "*Security Audit*" shall mean an in-depth examination of all aspects of security measures and procedures in order to determine if they are being implemented on a continual basis and to a constant standard ;

(60) "*Security control*" A means by which the introduction of weapons, explosives or other dangerous devices, articles or substances which may be used to commit an act of unlawful interference can be prevented.

(61) "*Security Directive*" means a formal written notification from the Director of NCAA requiring the recipient to take such security measures as are specified within the directive ;

(62) "*Security Programme*" means an Aerodrome Operator Security Programme, National Aircraft Operator Security Programme, Foreign Aircraft Operator Security Programme, Flight Catering Operator Security Programme, Tenant Restricted Area Security Programme and a Regulated Agent Security Programme, where applicable ;

(63) "*Security Incident*" shall mean an occurrence with negative implications for the security ;

(64) "*Security Inspection*" shall mean an examination of the implementation of relevant national civil aviation security programme requirements by an airline, airport or other entity involved in security ;

(65) "*Security restricted area*" Those areas of the airside of an airport which are identified as priority risk areas where in addition to access control, other security controls are applied. Such areas will normally include, inter alia, all commercial aviation passenger departure areas between the screening checkpoint and the aircraft, the ramp, baggage make-up areas, including those where aircraft are being brought into service and screened baggage and cargo are present, cargo sheds, mail centres, airside catering and aircraft cleaning premises.

(66) "*Security Survey*" means an evaluation of security needs including the identification of vulnerabilities which could be exploited to carry out an acts of unlawful interference and the recommendation of corrective actions ;

(67) "*Security Test*" means a covert or overt trial of an aviation security measure which simulates an attempt to commit an unlawful act ;

(68) "*Sterile Area*" means the area between any passenger inspection or screening checkpoint and aircraft, into which access is strictly controlled ;

(69) "*Technical Instructions*" means the International Civil Aviation Organization Instructions for the transport of Dangerous Goods by air ;

(70) "*Tenant Restricted Area*" means any area at, or connected to, an aerodrome that has been declared as such in accordance with the appropriate Airport (Restricted Area) Bye-laws ;

(71) "*Transfer cargo and mail*" means Cargo and mail departing on an aircraft other than that on which it arrived ;

(72) "*Transfer Passenge*r" means a passenger making direct connection between two different flights ;

(73) "*Transit Passenger*" means a passenger departing from an aerodrome on the same flight on which hear rived ;

(74) "*Unidentified baggage*" means Baggage at an airport, with or without a baggage tag, which is not picked up by or identified with a passenger ;

(75) "*Unpredictability*" means the implementation of security measures in order to increase their deterrent effect and their efficiency, by applying them at irregular frequencies, different locations and/or with varying means, in accordance with a defined framework ;

(76) "*Weapon*" means anything designed, used or capable of inflicting harm and includes a firearm.

17.3. AUTHORITY AND NATIONAL CIVIL AVIATION SECURITY PROGRAMME.

Authority and National Civil Aviation Security Programme.

17.3.1. The Nigerian Civil Aviation Authority (NCAA) is designated as the appropriate authority for aviation security within Nigeria, and shall specify this to the International Civil Aviation Organisation (ICAO), and is hereby responsible for the development, and maintenance of the national civil aviation security programme.

17.3.2.—(*a*) The Authority shall establish, and monitor the implementation of, awritten national civil aviation security programme designed to safeguard civil aviation operations against acts of unlawful interference, which takes into account the safety of passengers, crew, ground personnel and the general public including regularity and efficiency of flights.

(*b*) The implementation of the written national civil aviation security programme shall be capable of responding rapidly to meet any increased security threat.

17.3.3. The national civil aviation security programme shall be the repository of national policy of the Federal Government of Nigeria with regard to civil aviation security measures implemented within Nigeria and on Nigerian registered aircraft, and shall specify the agencies responsible for the implementation of that policy.

17.3.4.—Any person, assigned responsibility for a specific function or task with in the national civil aviation security programme, who fails to carry out that function or task, to the standard specified in the national civil aviation security programme, commits an offence under these Regulations, and upon conviction may be liable to a fine as specified in Part 1 to these Regulations.

17.4. GENERAL CONDITIONFOR SECURITY PROGRAMMES.

General Condition for Security Programmes.

17.4.1.—(*a*) An international airport operator or domestic airport operator shall not operate the aerodrome specified in his aerodrome license unless he has submitted, for such aerodrome, a proposed Airport Security Programme, which meets the requirements of these Regulations for acceptance and subsequent approval by the Authority.

(*b*) A person shall not operate a heliport within Nigeria unless he has submitted aproposed Heliport Security Programme which meets the requirements of these regulations for acceptance and subsequent approval by the Authority.

17.4.2. A person shall not operate a Nigerian registered aircraft within Nigeria or internationally unless he has submitted a proposed Aircraft Operator Security Programme for his operations, to the Authority for its acceptance and subsequent approval.

17.4.3. A foreign aircraft operator shall not conduct operations in Nigeria unless he has submitted a proposed Airline Operator Security Programme as part of his application for air services to the Authority for its acceptance.

17.4.4. An organization or agency shall not provide air traffic services unless such organization or agency has submitted a proposed air traffic service provider security programme which meets the requirement of this regulation for acceptance and subsequent approval by the Authority.

17.4.5. A person shall not operate an enterprise or an organization whose purpose is the movement of cargo by air, within and through Nigeria, unless he has submitted a proposed Air Cargo Operator Security Programme for his operations, to the Authority for its acceptance and subsequent approval, or has satisfied the Authority that appropriate security controls are in place for each consignment of cargo to safeguard aircraft against an act of unlawful interference.

17.4.6. A person shall not operate an enterprise or an organization whose purpose is the provision of catering supplies and stores for use in air transport, within and through Nigeria, unless he has submitted a proposed Flight Catering Operator Security Programme for his operations, to the authority for its acceptance and subsequent approval.

17.4.7. A person shall not operate an enterprise or an organization whose purpose is the provision of aviation services at any airport within Nigeria, unless he has submitted a proposed Aviation Service Provider Security Programme for his operations to the Authority for its acceptance and subsequent approval.

17.4.8. A person shall not operate an enterprise or an organization which provides a service at, or connected with, any airport within Nigeria, whether or not that service provider occupies land deemed to be a Tenant Restricted Area under the appropriate Airport (Restricted Area) Bye-Laws, unless he has submitted aproposed Tenant Restricted Area Security Programme for his operations, to the aerodrome operator for its acceptance and subsequent approval.

17.4.9. Proposed security programme required to be approved by the Authority shall :

(*i*) be submitted in writing at least sixty (60) days before the intended date of operations ;

(*ii*) meet the requirements of these Regulations.

17.4.10. A security programme under these Regulations shall be signed by the applicant and provide for the safety of the :

(*i*) passengers, crew and their property ;

(*ii*) the aircraft ;

(*iii*) operating staff associated with the facility or aircraft ; and

(*iv*) related aviation support facilities ; against acts of unlawful interference.

Additional requirements for applications.

17.5. Where a person, under 17.4., submits a security programme as part of his application for :

(*a*) an aerodrome certificate issued under Part 12 of these Regulations ;

(*b*) an Air Operator Certificate issued under Part 9 of these Regulations ; and

(*c*) a Foreign Carrier Operating Permit (FCOP) issued under Part 18 of these Regulations ; he shall in addition to meeting the requirements of the respective regulations above, meet the requirements of his security programme under this Part.

17.6. ACCEPTANCEOF SECURITY PROGRAMMES.

Acceptance of Security Programmes.

17.6.1. An acceptance under this Regulation does not authorize the aerodrome operator, aircraft operator, air traffic service provider, regulated agent, flight catering operator or Tenant Restricted Area operator to use his proposed security programme, submitted for approval under these Regulations, until such programme is evaluated and approved for use.

17.6.2. Notwithstanding 17.6.1 above, a foreign carrier/operator's security programme may be put to use provided it is accepted by the Authority.

17.7. CONTENTS OF AN AERODROME OPERATOR SECURITY PROGRAMME.

17.7.1. An Aerodrome Operator Security Programme required under 17.4. and 17.5. in respect of a licensed aerodrome shall be designed to describe the measures in place to safeguard that airport against acts of unlawful interference and shall be in such form, manner and content as specified in the National Civil Aviation Security Programme. Contents of an Aerodrome Operator Security Programme.

17.7.2. An Aerodrome Operator Security Programme under 17.7.1, shall be accompanied by a current scale map of the aerodrome as specified in 17.55.

17.8. An Aerodrome Operator Security Programme under 17.4. shall take into consideration the needs of all aviation stake holders, including : Development of Security Measures.

(*a*) reasonable access to a erodrome facilities and aircraft ; and

(b) the optimizing of aerodrome security arrangements in his development, renovation and expansion plans.

17.9. APPROVAL OF AERODROME OPERATOR SECURITY PROGRAMME.

17.9.1. An aerodrome operator shall within thirty days of approval of its security programme ensure that the programme is implemented and in full operation. Approval of Aerodrome Operator Security Programme.

17.9.2. An aerodrome operator shall notify the Authority of the commencement of the implementation of its approved Aerodrome Operator Security Programme.

17.10. An Aircraft Operator Security Programme required under 17.4. and 17.5. shall meet the requirements of the National Civil Aviation Security Programme and shall be in such form, manner and content as specified in the National Civil Aviation Security Programme. Contents of An aircraft Operator Programme.

17.11. An Aircraft Operator Security Programme under 17.4. shall include the provisions to meet : Development of Security Measures.

(*a*) its international obligations ;

(*b*) national obligations under the Act or Regulations made thereunder ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.12. APPROVAL OF AIRCRAFT OPERATOR SECURITY PROGRAMME.

17.12.1. An aircraft operator shall within thirty days of approval of its security programme ensure that the programme is implemented and in full operation. Approval of Aircraft Operator Security Programme.

17.12.2. An aircraft operator shall notify the Authority of the commencement of the implementation of its Aircraft Operator Security Programme.

17.12.3. Remotely Piloted Aircraft (RPA) shall have the same security procedures as aircraft operator."

Contents of an air traffic services provider security programme.

17.13. An Air Traffic Service Provider Security Programme required under 17.4. and 17.5. shall meet the requirements of the National Civil Aviation Security Programme and shall be in such form, manner and content as specified in the National Civil Aviation Security Programme.

Development ofsecurity measures.

17.14. An air traffic services provider Security Programme under 17.4. shall include the provisions to meet :

(*a*) its international obligations ;

(*b*) national obligations under the Act or Regulations made there-under ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.15. APPROVAL OF AIRTRAFFIC SERVICE PROVIDER SECURITY PROGRAMME.

17.15.1. An air traffic services provider shall within thirty days of approval of its security programme ensure that the programme is implemented and in full operation.

17.15.2. An air traffic services provider shall notify the Authority of the commencement of the implementation of its air traffic services provider Security Programme.

Contents of a Regulated Agent Security Programme.

17.16. A regulated agent Security Programme required under 17.4. shall meet the requirements of the National Civil Aviation Security Programme and shall bein such form, manner and content as specified in the National Civil Aviation Security Programme.

Development of Security Measures.

17.17. A regulated agent Security Programme under 17.4. shall include the provisions to meet :

(*a*) its international obligations ;

(*b*) national obligations under the Actor Regulations made there-under ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.18. APPROVAL OF A REGULATED AGENT SECURITY PROGRAMME.

Approval of a Regulated Agent Security Programme.

17.18.1. A regulated agent shall within thirty days of approval of its security programme ensure that the programme is implemented and in full operation.

17.18.2. A regulated agent shall notify the Authority of the commencement of the implementation of its regulated agent Security Programme.

17.19. An Air Cargo Operator Security Programme required under 17.4. shall meet the requirements of the National Civil Aviation Security Programme and shall be in such form, manner and content as specified in the National Civil Aviation Security Programme.

Contents of air Cargo Operator Security Programme.

17.20. An Air Cargo Operator Security Programme under 17.4. shall include the provisions to meet :

Development of Security Measures.

(*a*) its international obligations ;

(*b*) national obligations under the Actor Regulations made there-under ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.21. APPROVAL OF AN AIR CARGO OPERATOR SECURITY PROGRAMME.

Approval of an Air Cargo Operator Security Programme.

17.21.1. An Air Cargo Operator shall within thirty days of approval of its security programme ensure that the programme is implemented and in full operation.

17.21.2. An Air Cargo Operator shall notify the Authority of the commencement of the implementation of its Air Cargo Operator Security Programme.

17.22. CONTENTS OF FIGHT CATERING OPERATOR SECURITY PROGRAMME.

Contents of Fight Catering Operator Security Programme.

17.22.1. A Flight Catering Operator Security Programme required under 17.4. shall meet the requirements of the National Civil Aviation Security Programme and shall be in such form, manner and content as specified in the National Civil Aviation Security Programme.

17.22.2. A Flight Catering Operator Security Programme shall be accompanied by a current scale map of the flight catering facility area of operations.

17.23. A Flight Catering Operator Security Programme under 17.4. shall include the provisions to meet :

Development of Security Measures.

(*a*) its international obligations ;

(*b*) national obligations under the Act or Regulations made there-under ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.24. APPROVAL OF FLIGHT CATERING OPERATOR SECURITY PROGRAMME.

Approval of Flight Catering Operator Security Programme.

17.24.1. A Flight Catering Operator shall with in thirty days of approval of its security programme ensure that the programme is implemented and in full operation.

17.24.2. A Flight Catering Operator shall notify the Authority of the commencement of the implementation of its Flight Catering Operator Security Programme.

17.25. CONTENTS OF A TENANT RESTRICTED AREA SECURITY PROGRAMME.

Contents of a Tenant Restricted Area Security Programme.

17.25.1. A Tenant Restricted Area Security Programme required under 17.4. shall meet the requirements of the National Civil Aviation Security Programme and shall be in such form, manner and content as specified in the National Civil Aviation Security Programme.

17.25.2. The Tenant Restricted Area Security Programme shall be accompanied by a current scale map of the Tenant Restricted Area, as required and produced under the appropriate Airport (Restricted Area) Bye-laws.

Development of Security Measures.

17.26. A Tenant Restricted Area Operator Security Programme under 17.4. shall include the provisions to meet :

(*a*) its international obligations ;

(*b*) national obligations under the Actor Regulations made there-under ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.27. APPROVAL OF TENANT RESTRICTED AREA SECURITY PROGRAMME

Approval of Tenant Restricted Area Security Programme.

17.27.1. A Tenant Restricted Area operator shall with in thirty days of approval of its security programme ensure that the programme is implemented and in full operation.

17.27.2. A Tenant Restricted Area operator shall notify the aerodrome operator of the commencement of the implementation of its Tenant Restricted Area Security Programme.

Contents of Other Allied Aviation Service Providers Security Programme.

17.28. Other Allied Aviation Service Providers as listed in Part 18.9.1 required to have Security Programme under 17.4. shall meet the requirements of the National Civil Aviation Security Programme and shall be in such form, manner and contentas specified in the National Civil Aviation Security Programme.

Development of Security Measures.

17.29. Other Allied Aviation Service Providers Security Programme under 17.4. shall include the provisions to meet :

(*a*) its international obligations ;

(*b*) national obligations under the Actor Regulations made there-under ; and

(*c*) the requirement of the National Civil Aviation Security Programme.

17.30. APPROVAL OF OTHER ALLIED AVIATION SERVICE PROVIDERS SECURITY PROGRAMME.

Approval of Other Allied Aviation Service Providers Security Programme.

17.30.1. An other Allied Aviation Service Provider shall with in thirty days of approval of its security programme ensure that the programme is implemented and in full operation.

17.30.2. An other Allied Aviation Service Provider shall notify the Authority of the commencement of the implementation of its Aviation Service Provider Security Programme.

17.31. MODIFICATIONS TO OPERATIONAL PARTICULARS AFFECTING SECURITY.

Modifications to Operational Particulars Affecting Security.

17.31.1 Where a security programme has been approved under 17.9, 17.12, 17.15, 17.18, 17.21., 17.24, 17.27 and 17.30 (here in after referred to as ("an approved Security Programme"), the aerodrome operator, aircraft operator, air traffic service provider, regulated agent, air cargo operator, flight catering operator, other allied aviation service provider or tenant restricted area operator where applicable shall follow the procedures under 17.31.2. whenever he determines :

(*a*) in respect of an aerodrome operator :

(*i*) any description of the aerodrome area set out in such Aerodrome Operator Security Programme is no longer accurate ; and

(*ii*) the changes to the designation of the Aerodrome Security Co-ordinator required under 17.48 ;

(*b*) any description of his operations set out in his programme is no longer accurate, the procedures included, and the facilities and equipment described, in such Aerodrome Operator Security programme are no longer adequate.

17.31.2. When ever a condition described in17.31.1 occurs, the aerodrome operator, aircraft operator, air traffic service provider, regulated agent, air cargo operator, flight catering operator, other allied aviation service provider or tenantre stricted area operator where applicable shall :

(*a*) immediately notify the Authority of the changed condition, and identify each interim measure being taken to maintain adequate security until approval is granted for an appropriate amendment to his approved Security Programme ; and

(*b*) within thirty days after notifying the Authority in accordance with paragraph (*a*), submit for approval in accordance with 17.34, an amendment to his Security Programme to bring it in to compliance with these Regulations.

17.32. AMENDMENT OF APPROVED SECURITY PROGRAMME BY AERODROME OPERATOR, AIRCRAFT OPERATOR, AIRTRAFFIC SERVICE PROVIDER, REGULATED AGENT, AIR CARGO OPERATOR, FLIGHT CATERING OPERATOR, OTHER ALLIED AVIATION SERVICE PROVIDER ANDTENANT RESTRICTED AREA OPERATOR.

17.32.1. Where an entity wishes to amend its approved Security Programme, it shall submit the request for such approval to the Authority at least thirty days before the proposed effective date of intended implementation of the amended approved Security Programme.

17.32.2. When the Authority is satisfied that the proposed amendment to the approved Security Programme provides the level of security required by these Regulations, the Authority shall approve the amended approved Security Programme.

17.33. AMENDMENT OF APPROVED SECURITY PROGRAMME BY THE AUTHORITY.

Amendment of approved Security Programme by the Authority.

17.33.1. The Authority may require an entity to amend its approved Security Programme, where it is determined that safety and public interest require the amendment.

17.33.2. Except in an emergency as provided in 17.33.5 where the Authority requires an entity to amend its approved Security Programme under 17.33.1. the Authority shall notify the entity in writing of the required amendment and allow a period of thirty days from the date contained in the notice, for a written response from such entity.

17.33.3. Upon receipt of a notice of a proposed amendment under 17.33.2 the entity may submit an alternative amendment to his approved Security Programme which meets the intent of the required amendment under 17.33.2. for consideration by the Authority.

17.33.4. When the Authority is satisfied that the alternative amendment submitted under 17.33.3 would provide an over all level of security equal to that required by the Authority, the Authority may approve the alternative amendment to the approved Security Programme.

17.33.5. Where the Authority determines that an emergency exists which requires immediate action that makes the procedure in 17.33.2 and 17.33.3, impracticable or contrary to the public interest and safety, the Authority may direct the entity to deviate in a specified manner from its approved security programme in the area of concern, for a specified period.

AERODROME SECURITY.

17.34. AERODROME OPERATOR RESPONSIBILITIES.

Aerodrome Operator Responsibilities.

17.34.1 An aerodrome operator shall, prior to the implementation of any renovation and expansion works to his aerodrome or the construction of additional aerodrome facilities at the same location, submit to the Authority a revision of his measures designed to safeguard against acts of unlawful interference which may arise.

17.34.2. Where a foreign aircraft operator uses the aerodrome facilities of an aerodrome operator, the Authority may, in co-ordination with the aerodrome operator, approve an inspection by the entity responsible for aviation security of the Contracting State of such foreign aircraft operator in order to assess the adequacy of the security measures.

17.34.3. An aerodrome operator shall keep at the aerodrome a current scale map of the aerodrome that identifies the restricted areas in accordance with the appropriate Airport (Restricted Area) Bye-laws, security barriers and restricted area access points.

17.35. AERODROME SECURITY COMMITTEE.

17.35.1. An aerodrome operator shall establish an Aerodrome Security Committee to ensure the implementation of any national civil aviation security initiatives that may be required by the Authority from time to time. Aerodrome Security Committee.

17.35.2. An Aerodrome Security Committee under 17.31.1 shall comprise of those representatives stipulated within the respective Aerodrome operator Security Programmes approved by the Authority.

17.36. AVIATION SECURITY OFFICERSAND AVIATION SECURITY SCREENING OFFICERS.

17.36.1. An aerodrome operator shall provide aviation security officers and aviation security screening officers, in the number and in a manner adequate to support : Aviation Security Officers and Aviation Security Screening Officers.

(*a*) its Aerodrome Operator Security Programme ; and

(*b*) each passenger screening system required under any Part of these Regulations.

17.36.2. An aerodrome operator shall ensure that an aviation security officer or aviation security screening officer under its employment :

(*a*) abstains from the consumption of alcoholic beverages or other substances prohibited by law while assigned to duty ; and

(*b*) is readily identifiable by uniformand displays or carries a badge or other identification of his/her authority while assigned to duty ; and

(*c*) has completed a training programme that meets the requirements in 17.36.6.

17.36.3. An aerodrome operator shall ensure that an aviation security officer or aviation security screening officer under its employment :

(*a*) is authorized to carry out the duties and functions assigned to him/her ; and

(*b*) conducts security duties in accordance with the applicable provisions of these Regulations.

17.36.4. An aviation security officer or aviation security screening officer shall, while on duty at an aerodrome, have the authority to arrest with or without a warrant, any person, who committed :

(*a*) a crime ; or

(*b*) an offence against any of these Regulations or the appropriate Airport (Restricted Area) Bye-laws in force.

17.36.5. Any person who obstructs, insults, intimidates or performs any act of violence against an aviation security officer or aviation security screening officer, while that officer is on duty at an aerodrome is guilty of an offence and shall upon conviction be liable to a penalty as specified in Part 1 to these Regulations.

17.36.6. The training programme required by17.36.2 (*c*) shall provide training in the subjects specified within the approved Aerodrome Operators Security Programme and shall meet the training standards specified by the Authority.

17.37. EMPLOYER'S RESPONSIBILITY.

Employer's Responsibility.

17.37.1. An aerodrome operator shall not employ any person as an aviation security officer or aviation security screening officer unless :

(*a*) such person meets the requirements of these Regulations ;

(*b*) such person has been trained in accordance with the requirements of these Regulations, where his duties are in respect to screening of passengers, crew, baggage and mail ; and

(*c*) where employed by the aerodrome tenant as an aviation security officer, such person is approved by the aerodrome operator.

17.37.2—(*a*) initial and periodic background checks are performed in respect of each aviation security officer and aviation security screening officer ; and

(*b*) initial and recurrent training on aviation security is received by each aviation security officer and aviation security screening officer in his employment.

17.37.3. An aerodrome operator shall keep an accurate record of the initial and periodic background check, experience and training of an aviation security officer and aviation security screening officer in his employment and such record shall be retained for the duration of his employment and there after for a period of one year.

17.38. SUPPORT FROM MEMBERS OF THE NIGERIA POLICE.

Support from Members of The Nigeria Police.

17.38.1. At each aerodrome certified by the Authority, members of the Nigeria Police shall be deployed in support of the aerodrome security personnel to provide an armed response capability to prevent the occurrence of acts of unlawful interference.

17.38.2. The deployment of these members of the Police will be in accordance with the measures described with in the appropriate aerodrome security programme.

17.39. REQUIREMENT FOR SCREENING.

Requirement for Screening.

17.39.1.—(*a*) Every person entering a sterile area, or enhanced security restricted area, at any aerodrome to which these Regulations apply, as specified within the appropriate aerodrome security programme, is required to be screened, including any carry-on baggage, goods or other articles in their possession.

(*b*) Vehicles entering Security Restricted Areas together with items contained within them, shall be screened or subjected to other appropriate security controls.

17.39.2. An organization approved by the Authority to carry out screening functions shall ensure that any person who acts or will act as a screening officer for it or on its behalf meets the minimum standard set out by the Authority, as amended from time to time.

17.39.3. An aircraft operator shall not transport a person or goods that must be screened in accordance with 17.39.1 unless the person or goods have been screened in accordance with this regulation.

17.39.4. A person who must be screened under 17.39.1 must not circumvent a screening of their person or goods or other things in their possession or control or a vehicle under their care or control or assist an other person who must be screened in circumventing a screening of that person or goods or other things in that person's possession or control or a vehicle under that person's care or control.

17.39.5. A person(s) who is at an aerodrome or on board an aircraft must not falsely declare that :

(*a*) they are carrying a weapon, an explosive substance, an incendiary device or other dangerous item that could be used to jeopardize the security of an aerodrome or aircraft or that such an item is contained in goods or other things in their possession or control or in a vehicle under their care or control that they have tendered or are tendering for screening or transportation ; or

(*b*) an other person who is at the aerodrome or on board an aircraft is carrying a weapon, an explosive substance, an incendiary device or other dangerous item that could be used to jeopardize the security of an aerodrome or aircraft or that such an item is contained in goods or other things in that person's possession or control or in a vehicle under their care or control and is being tendered or has been tendered for screening or transportation.

17.39.6. Not with standing 17.39.1 the Authority may, exempt such persons as he deems appropriate from the requirements to be screened. Any exemption made under this Regulation shall be promulgated in the National Civil Aviation Security Programme.

17.40. REFUSAL OF SCREENING.

Refusal of Screening.

17.40.1. Subject to 17.39.6, any person who refuses to allow himself and his carry-on baggage, goods or other articles in his possession to be screened will be denied access to the enhanced security restricted area or sterile area.

17.40.2. Where, after entering an enhanced security restricted area or sterile area, a person who is required by an aviation security officer or aviation security screening officer, to submit to screening of his person, goods, vehicle or means of conveyance refuses such a search, the aviation security officer or aviation security screening officer shall order such person to leave the enhanced security restricted area or sterile area and remove the goods, vehicle or means of conveyance in his possession from the enhanced security restricted area or sterile area.

17.40.3. Where, after having boarded an aircraft, a passenger is required by an aviation security officer or aviation security screening officer to submit to the screening of his person, or of the goods that he carried or had placed on board the aircraft and he refuses such a screening, the aviation security officer or aviation security screening officer shall order such person to disembark the aircraft and remove the carry-on baggage, goods or checked baggage of such person.

Unaccompanied Baggage.

17.41. Where baggage is received at an aerodrome for transport on an aircraft and such baggage is not accompanied by a person who may give the permission to screen such baggage, an aviation security officer or aviation security screening officer, shall carry out an authorized search of the baggage in the presence of the aircraft operator concerned or a regulated agent, and in carrying out that search may use such force as may reasonably be necessary to gain access to the baggage.

Unattended Baggage.

17.42. Where baggage is left unattended or abandoned at an airport terminal, an Aviation security officer shall consider such bag suspect and report to the police so that it can be investigated and if necessary, removed to a safe location and confiscated.

17.43. SECURITY INCIDENTS.

Security Incidents.

17.43.1. An aerodrome operator, aircraft operator, aerodrome tenant, air cargo operatoror regulated agent shall immediately notify an aviation security officer, aviation security screening officer, or a Police officer when there is :

(*a*) the discovery of an unauthorized firearm other than an unloaded firearm allowed under the security programme of an aircraft operator ;

(*b*) the discovery, at the a erodrome, or on board an aircraft, of an explosive substance or an incendiary device or a suspected explosive substance or suspected incendiary device ;

(*c*) refusal by a person to submit to the security screening required under these Regulations ;

(*d*) refusal by a person to remove himself and his goods from a restricted area when so ordered by an aviation security officer ;

(*e*) a report of unattended baggage located in his area of responsibility ;

(*f*) a report of suspicious packages, articles or goods in his area of responsibility ; or

(*g*) a specific threat against the aerodrome comes to his attention.

17.43.2. An aerodrome operator shall investigate any of the reported security incidents set out in 17.43.1 and provide a report of the incident to the Authority in accordance with procedures set out in his approved Aerodrome Operator Security Programme.

17.44. RECORDS.

17.44.1. An aerodrome operator shall ensure that a record of every security incident is kept at his aerodrome. Records.

17.44.2. A record required to be kept under 17.44.1 shall :

(*a*) be kept for a minimum of ninety days ;

(*b*) be made available to the Authority up on request ; and

(*c*) include the number :

(*i*) and type of weapons and incendiary devices discovered during any passenger screening process and the method of detection of each ;

(*ii*) of acts and attempted acts of air piracy ;

(*iii*) of bomb threat sreceived, real and simulated bombs found and actual bombings at the aerodrome ; and

(*iv*) of detentions and arrests and the immediate disposition of each person detained or arrested.

17.45. AERODROME TENANT AND TENANT RESTRICTED AREA (TRA) OPERATOR RESPONSIBILITY.

17.45.1. An aerodrome tenant restricted area operator, and any other tenants at any aerodromes,shall develop security measure stomanage access to the tenant restricted area, or other area, under his control in compliance with the TRA Security Programme submitted for approval under 17.25, or the Aerodrome Security Programme under 17.7. Aerodrome Tenant and Tenant Restricted Area (TRA) Operator Responsibility.

17.45.2. An aerodrome tenant restricted area operator, or other tenant, shall ensure that his personnel receive appropriate aerodrome security training or security awareness training as appropriate, in accordance with the approved TRA Security Programme or Aerodrome Security Programme.

17.45.3. An aerodrome tenant restricted area operator, or other tenant, shall not use a person as an aviation security officer unless the employment of such person has been approved by the aerodrome operator.

Confidential Security Information.

17.46. No person shall divulge documented information in respect of security measures in effect at an aerodrome without the permission of the aerodromeoperator.

False Statements, Entries or Unauthorised Reproduction.

17.47. No person shall make, or cause to be made, any of the following :

(*a*) a fraudulent or intentionally false statement in any Aerodrome Operator Security Programme or an application for any security programme ;

(*b*) a fraudulent or intentionally false entry in any record or report that is kept, made or used to show compliance with this Part or exercise any privileges under this Part ; and

(*c*) are production or alteration of any report, record, security programme, issued under this Part without the approval of the aerodrome operator.

17.48. Access Control System.

Access Control System.

17.48.1. An aerodrome operator shall ensure that the location and function of restricted areas, enhanced security restricted areas and sterile areas at the aerodrome are designated and properly defined within the appropriate Airport (Restricted Area) Bye-laws.

17.48.2. The level of access to a restricted area, enhanced security restricted area or sterile area shall be clearly defined and made known to all persons at the aerodrome whose duties require them to have access to these areas.

17.48.3. An aerodrome operator shall include in his approved Aerodrome Operator Security Programme details of a system, method and procedure, which shall ensure that :

(*a*) access points in to restricted areas, enhanced security restricted areas or sterile areas are limited in number and physical access through those points are strictly controlled ;

(*b*) entry points which cannot be effectively controlled are locked or other wise secured against entry by unauthorized persons ;

(*c*) access by persons and vehicles to restricted areas, enhanced security restricted areas and sterile areas is restricted only to persons who have a clear need for such access by virtue of their duties ;

(*d*) enhanced security restricted areas and sterile areas not subject to continual access control measures shall be subjected to a thorough search prior to being brought in to use ;

(*e*) a person whose duties require him to be at the aerodrome is required to have on display on his person, a valid aerodrome identification permit and any baggage or item he carries shall be screened before being allowed access to enhanced security restricted areas or sterile areas ;

(*f*) the screening under paragraph (*e*) shall be to the same standard as that required for passengers, under 17.39 ; and

(*g*) persons at an aerodrome are aware of what areas they are prohibited access.

17.48.4. Not with standing the screening requirements under 17.48.3 (*e*), the Authority may consider screening at certainaccess points on a random basis depending on the assessed risk where details of such risks are included in an approved Aerodrome Operator Security Programme.

17.48.5. The system under 17.48.2 shall provide a means to differentiate the various airport restricted areas that holders of airport restricted area permits are allowed access to.

17.48.6. The system under 17.48 2 shall describe the scope of initial and periodic background checks conducted on applicants for all types of airport restricted area permits issued.

17.49. AIRPORT RESTRICTED AREA PERMIT SYSTEM

Airport Restricted Area Permit System.

17.49.1. An aerodrome operator shall ensure that access to a restricted area, enhanced security restricted area or sterile area of his aerodrome is controlled by the use of an airport restricted area permit system to identify persons and vehicles and facilitate access where authorized.

17.49.2. Notwithstanding the provisions of 17.49.1, the airport restricted area permit system shall be in accordance with the appropriate Airport (Restricted Area) Bye-laws.

Evidence of Compliance.

17.50. On request of the Authority, an aerodrome operator shall provide evidence of compliance with this Part in his approved Aerodrome Operator Security Programme.

17.51. AERODROME SECURITY CO-ORDINATOR

Aerodrome Security Co-ordinator.

17.51.1. An aerodrome operator shall designate, in his approved Aerodrome Operator Security Programme, an officer in his organization as the Aerodrome Security Co-ordinator, who shall be held responsible for the co-ordination of all aviation security policies, procedures and preventive measures applied at a designated airport.

17.51.2. An aerodrome operator shall appoint a person suitably qualified, trained and experienced in aviation security charged with responsibility for co-ordinating the implementation of the Aerodrome Operator Security Programme and having direct line of communication with the aerodrome operator's chief executive officer.

17.51.3. The aerodrome security co-ordinator shall be acceptable to the Authority.

17.51.4. An Aerodrome Security Co-ordinator shall serve as the primary contact of the aerodrome operator for security-related activities and communications with the Authority, as set forth in the approved Aerodrome Operator Security Programme.

Measures in The event of Specific Threat at Aerodrome.

17.52. Where an aerodrome operator determines that a specific threat that jeopardizes the security of its aerodrome exists, it shall immediately take all of the measures necessary to ensure the safety and security of the aerodrome and persons at the aerodrome, including informing the appropriate aviation security officers and/or aviation security screening officers of the nature of the threat.

17.53. NOTIFICATION OF THREAT.

Notification of Threat.

17.53.1. An aerodrome operator who is made aware of a threat against an airport facility or any part of his aerodrome, or tenant restricted area that is under the control of a person carrying on any activity at or connected with his aerodrome, other than the aerodrome operator, he shall immediately :

(*a*) notify the person in control of that facility or tenant restricted area of the nature of the threat ; and

(*b*) determine whether there is a specific threat that jeopardizes the security of the aerodrome.

17.53.2. Where a person authorized to conduct any screening activity at an aerodrome is made aware of a threat against the aerodrome, such person shall :

(*a*) immediately notify the aerodrome operator of the nature of the threat; and

(*b*) assist the aerodrome operator in determining whether there is a specific threat that jeopardizes the security of the aerodrome.

17.54. DISCOVERY OF WEAPONS, INCENDIARY DEVICESOR EXPLOSIVES AT AERODROMES.

Discovery of Weapons, Incendiary Devicesor Explosives at Aerodromes.

17.54.1. An aerodrome operator shall immediately notify the Authority when there is :

(*a*) the discovery, at the aerodrome, of a weapon, other than an unloaded firearm allowed under 17.60 ;

(*b*) the discovery, at the aerodrome, of an explosive substance or an incendiary device, other than an explosive substance or incendiary device allowed under the Act or Regulations made there under ;

(*c*) an explosion at the aerodrome, unless the explosion is known to be the result of an excavation, a demolition, construction or the use of fire works displays ; or

(*d*) a specific threat against the aerodrome.

17.54.2. An aerodrome operator shall make arrangements to investigate, render safe and/or dispose suspected dangerous devices or other potential hazards at the airport.

17.55. An aerodrome operator shall keep at the aerodrome a certified copy of acurrent scale map and/or plan, certified by the Authority, of the aerodrome and buildings located at that aerodrome, that identifies the restricted areas, enhanced security restricted areas and sterile areas, security barriers and restricted are a access points, enhanced security restricted area access points, and sterile area access points.This map and/or plan is to be produced in accordance with the appropriate Airport (Restricted Area) Bye-laws.

Keeping Aerodrome Maps and plans.

17.56. AERODROME OPERATOR TO PROVIDE INFORMATION

17.56.1. The aerodrome operator shall provide to the Authority, on reasonable notice given by the Authority, written or electronic records or other information relevant to the security of the aerodrome, including :

Aerodrome Operator to Provide Information.

(*a*) information concerning the method of implementing the security measures that apply to the aerodrome operator under 17.4.1 ; and

(*b*) a copy of the scale map and/or plan referred to in 17.55.

17.56.2. An aerodrome operator shall provide the Authority with written notice of any new commercial air transportation service that is to commence operations at the airport terminal building.

17.57. AIRCRAFT OPERATOR SECURITY PROGRAMME

17.57.1. An aircraft operator having an approved Aircraft Operator Security Programme shall :

Aircraft Operator Security Programme.

(*a*) maintain one copy of his approved Aircraft Operator Security Programme at his principal business office ;

(*b*) maintain a copy or the pertinent portions of his approved Aircraft Operator Security Programme at each aerodrome where they operate ;

(*c*) make the documents under paragraphs (*a*) and (*b*), available for inspection upon request by the Authority ; and

(*d*) restrict the distribution, disclosure, and availability of sensitive security information only to persons who by their defined roles in the programme require to have such information for the performance of their function.

17.57.2. An aircraft operator shall appoint a person suitably qualified, trained and experienced in aviation security charged with responsibility for co-ordinating the implementation of the Aircraft Operator Security Programme and having direct line of communication with the aircraft operators chief executive officer.

17.57.3. The aircraft operator security co-ordinator shall be acceptable to the Authority

17.58. SCREENING OF PASSENGERS AND PROPERTY

Screening of Passengers and Property.

17.58.1. An aircraft operator shall ensure that at aerodromes, screening is conducted of :

(*a*) passengers, transit passengers, transfer passengers and crew travelling on his aircraft ;

(*b*) carry-on baggage of persons under paragraph (*a*) ;

(*c*) checked baggage of persons under paragraph (*a*) ; and

(*d*) other goods in the hold of his aircraft.

17.58.2. Notwithstanding 17.58.1. an aircraft operator may authorize the aerodrome operator of the aerodrome from which he operates or any other person to conduct the screening functions set out in his approved Aircraft Operator Security Programme.

17.58.3. In giving anauthorization to an aerodrome operator or any other person under 17.58.2. the aircraft operator shall further instruct such aerodrome operator or person, to prohibit any passenger refusing to be screened from entry on to any of his aircraft.

17.58.4. An aircraft operator or person authorized by him under17.58.2., shall use the procedures and the facilities and equipment described in his Aircraft Operator Security Programme :

(*a*) to prevent or deter the carriage of any weapon or incendiary device on or about the person of an individual or accessible property and the carriage of any weapon or incendiary device in checked baggage on aircraft ;

(*b*) to detect the existence of a weapon or incendiary device, to inspect each person entering a sterile area at each pre-boarding screening checkpoint and to inspect all accessible property under the control of such person ; and

(*c*) to perform the following control functions with respect to each aircraft operation for which screening is required :

(*i*) prohibit unauthorized access to the aircraft ;

(*ii*) ensure that baggage carried in the aircraft is checked-in by aproperly trained agent and that identification is obtained from all passengers and persons shipping goods or cargo on board the aircraft ;

(*iii*) ensure that cargo and checked baggage carried on board the aircraft are handled in a manner that prohibits unauthorized access ; and

(*iv*) conduct a security inspection of the aircraft before placing it in service and after it has been left unattended ;

(*v*) ensure that aircraft are protected from unauthorized interference from the time the aircraft search or check has commenced until the aircraft departs.

17.58.5. An aircraft operator shall refuse to transport :

(*a*) any person who does not consent to an authorized search of his person when required to do so by the aircraft operator or person authorized to conduct such searches on his behalf ; and

(*b*) any property of any person who does not consent to a search or inspection of that property in accordance with the screening system prescribed by 17.58.1.

17.58.6. An aircraft operator shall remove from the aircraft any item(*s*) left behind by passenger disembarking from any commercial flight or otherwise dealt with such item(s) appropriately before departure of such aircraft.

17.58.7. A foreign aircraft operator shall not conduct a flight within Nigeria with a passenger on board who refuses to submit to a screening, required under these Regulations or while the carry on or checked baggage of such person is on board his aircraft.

17.58.8. Not with standing being in possession of a boarding pass,where the pilot in command of an aircraft has reasonable grounds to believe that a person is in violation of this Part, the pilot in command may order that person to disembark such aircraft.

17.59. PREVENTION AND MANAGEMENT OF HIJACK AND SABOTAGE ATTEMPTS

Prevention and Management of Hijack and Sabotage Attempts

17.59.1. An aircraft operator shall :

(*a*) assign an appropriately qualified and trained person as a Ground Security Co-ordinator to co-ordinate the ground security duties specified in his approved Aircraft Operator Security Programme ; and

(*b*) designate the pilot-in-command as the In-flight Security Co-ordinator for each flight, as required by his approved Aircraft Operator Security Programme to co-ordinate activities in response to threats of acts of unlawful interference.

17.59.2. An aircraft operator shall, where approved by the Authority, permit and facilitate the carriage of in-flight security officers on specific flights to prevent :

(*a*) unauthorized persons from gaining access to the flight deck ; and (*b*) hijacks and other criminal acts on board the aircraft.

17.59.3. In-flight Security Officers under this section, where required to be on board a flight, shall :

(*a*) prevent unauthorized persons from gaining access to the flight deck and prevent hijacks and other criminal acts on board the aircraft ; and

(*b*) conduct a crew briefing prior to departure to ensure the flight crew and cabin crew under stand his/her role on board the aircraft.

(*c*) be a selected government personnel.

(*d*) be trained on safety and security aspects on board an aircraft and.

(*e*) be deployed according to the threat assessment of the competent authority and.

17.59.4. The deployment of in-flight security officers shall be co-ordinated with concerned States and kept strictly confidential.

17.60. CARRIAGE OF WEAPONS

Carriage of Weapons.

17.60.1. An aircraft operator shall not permit any person, who is not authorized, to have on or about his person or property, a weapon, either concealed or unconcealed, accessible to him while on board an aircraft.

17.60.2. 17.60.1. shall not apply to in-flight security officers required to be on board under 17.59.2.

17.60.3. A person shall not, without authority, while on board an aircraft operated by an aircraft operator, carry on or about his person, a weapon, either concealed or unconcealed.

17.60.4. An aircraft operator shall not knowingly permit any person to transport, nor shall any person transport or tender for transport, a weapon, incendiary device or loaded firearm in checked baggage on board an aircraft with out proper authorization.

17.60.5. An aircraft operator shall not knowingly permit any person to transport, nor may any person transport or tender for transport, any unloaded firearm in checked baggage on board an aircraft unless :

(*a*) such person declares to the aircraft operator, either orally or in writing before tendering the baggage for the purpose of being checked in that he has a firearm carried in his/her checked baggage and it is unloaded ;

(*b*) the baggage or container in which a fire arm is carried is locked ;

(*c*) the checked baggage or container containing the fire arm is loaded on the aircraft in an area that is inaccessible to passengers ; and

(*d*) such person presents a licence for such fire arm from the State that permits him to have in his possession such fire arm, an export licence for such fire arm from the State of departure and an import licence for such fire arm to the State of destination.

17.60.6. Where a fire arm to be transported in checked baggage but is not secured in such checked baggage it shall be carried in the hold of the aircraft, in a container that the aircraft operator considers appropriate for airtransportation.

17.61. Use of Screening Equipment

Use of Screening Equipment.

17.61.1. An aerodrome operator, aircraft operator or person authorized to conduct screening on his behalf, shall not us any screening equipment systems within Nigeria to inspect carry-on or checked baggage unless specifically authorized under an approved Aircraft Operator Security Programme required by 17.12. or an approved Aerodrome Security Programme required by 17.4.

17.61.2. An aerodrome operator, aircraft operator, or any other person authorized to conduct screening on his behalf, may be authorized by the Authority, to use X-ray systems for inspecting carry-on or checked baggage under an approved Aircraft Operator Security Programme, or Aerodrome Security Programme where he shows that :

(*a*) the X-ray system complies with the standards for X-ray systems designed primarily for the inspection of carry-on and checked baggage and meets the performance requirements set out by the Authority in the National Civil Aviation Security Programme ;

(*b*) a programme for initial and recurrent training of operators of the system is established, which includes training in radiation safety, the efficient use of X-ray systems, and the identification of weapons and other dangerous articles, as prescribed in the National Aviation Security Training Programme ; and

(*c*) the system meets the imaging requirements described in the approved Aircraft Operator Security Programme, or Aerodrome Security Programme in accordance with the combined test requirements prescribed by the Authority.

17.61.3. An aerodrome operator, aircraft operator, or any other person authorized to conduct screening on his behalf, shall ensure that an X-ray system is not used :

(*a*) unless within the preceding twelve months, a test has been conducted which shows that the system meets the applicable performance standards or guidelines prescribed by the Authority ; and

(*b*) after the system is initially in stalled or after it has been moved from one location to another, a test has been conducted which shows that the system meets the applicable performance standards or guidelines prescribed by the Authority.

17.61.4. An aerodrome operator, aircraft operator, or any other person authorized to conduct screening on his behalf, shall maintain at least one copy of the results of the most recent test conducted under 17.61.3 and shall make it available for inspection upon request by the Authority at each of the following locations :

(*a*) the principal business office of the organization conducting the screening ; and.

(*b*) the place where the X-ray system is in operation.

17.61.5. An aerodrome operator, aircraft operator, or any other person authorized to conduct screening on his behalf, shall ensure that screening staff comply with X-ray operator duty time limitations specified in his Aircraft Operator Security Programme, or Aerodrome Security Programme.

17.62. SECURITY THREATS AND PROCEDURES

Security Threats and Procedures.

17.62.1. Where an aircraft operator determines that there is a specific threat which jeopardizes the security of an aircraft or flight, he shall immediately take all of the measures necessary to ensure the safety of the aircraft, passengers and crew on board such aircraft, including :

(*a*) informing the pilot-in-command, the crew members assigned to the aircraft or flight, the aerodrome operator and the appropriate Police agency of the nature of the threat ;

(*b*) where the aircraft is on the ground, moving such aircraft to a place of safety at the aerodrome according to the directions of the aerodrome operator ; and

(*c*) the inspection of the aircraft and search of the passengers and goods on board such aircraft, unless the in spection and search are likely to jeopardize the safety of the passengers and crew members.

17.62.2. Where the aircraft, under 17.62.1 is on the ground, the pilot in command shall comply with any direction given by the aerodrome operator under 17.62.1(*a*) or a member of the appropriate Police agency, unless complying with such direction is likely to jeopardize the safety of the passengers and crew members.

17.62.3. Immediately upon receiving information that an act or suspected act of unlawful interference has been committed, the aircraft operator shall notify the Authority.

17.62.4. Where an aircraft operator determines that there is a specific threat which jeopardizes the security of a facility, a tenant restricted area, or part of an aerodrome under his control, he shall immediately take all of the measures necessary to ensure the safety of the facility, tenant restricted area or part of the aerodrome and persons at the facility, including informing the aerodrome operator and the appropriate Police agency of such threat.

17.62.5. Where the aircraft under 17.62.3 is in the air space under the jurisdiction of a State other than Nigeria, the aircraft operator shall also notify the Authority of the State in whose territory the aircraft is located and, if the aircraft is in flight, the Authority of the State in whose territory the aircraft is to land.

17.62.6. Upon receipt of a bomb threat against a specific aircraft, each aircraft operator shall attempt to determine whether or not any explosive or incendiary device is aboard the aircraft involved by doing the following :

(*a*) conduct an analysis of the threat and classify the threat as :

(*i*) a hoax ;

(*ii*) non-specific ; or

(*iii*) specific ;

(*b*) in cases of (*ii*) and (*iii*), consider conducting a security in spection on the ground before the next flight or, where the aircraft is in flight, immediately after its next landing ; and

(*c*) where the aircraft is on the ground, advising the pilot-in-command of the results of the analysis and the proposed action to be taken ; or

(*d*) where the aircraft is in flight, immediately advising the pilot-in-command of all pertinent information available so that necessary emergency action can be taken.

17.62.7. Where the aircraft is in flight, ensure the pilot-in-command notifies the appropriate air traffic control authority of the threat.

17.63. Reporting of Security Incidents.

17.63.1. An aircraft operator shall immediately notify the Authority when there is : Reporting of Security Incidents.

(*a*) a hijack or attempted hijack of an aircraft ;

(*b*) the discovery, on board an aircraft, of a weapon, other than an unloaded firearm allowed under 17.43.1(*a*) or 17.60 ;

(*c*) the discovery, on board an aircraft, of an explosive substance or an incendiary device, other than an explosive substance or incendiary device allowed on board the aircraft under the Act or Regulations made hereunder ;

(*d*) an explosion on an aircraft ; or

(*e*) a specific threat against an aircraft, a flight or a facility or part of an aerodrome under his control.

17.63.2. An aircraft operator shall immediately notify the aerodrome operator when a weapon other than a fire arm allowed under 17.43.1.(*a*),or 17.60, is detected in any part of the aerodrome under his control.

17.64. PERSON AUTHORIZED TO CONDUCT SCREENING ACTIVITIES.

Person Authorized to Conduct Screening Activities.

17.64.1. A person authorized to conduct screening activities shall immediately notify the appropriate aircraft operator, aerodrome operator, the Nigeria Police and the Authority when any of the following is detected at a restricted area access point where screening is conducted of persons and carry-on baggage and other articles in the possession or control of persons who are screened :

(*a*) a weapon, other than a weapon allowed under 17.43.1 (*a*) or 17.60 ;

(*b*) an explosive substance, other than :

(*i*) ammunition carried by a person allowed to carry or have access to a weapon or fire arm under 17.43.1 (*a*) and 17.60 ; or

(*ii*) an explosive substance allowed under theAct or Regulations made thereunder ; or

(*c*) an incendiary device, other than an incendiary device allowed under the Actor Regulations made there under.

17.64.2. A person authorized to conduct screening activities shall immediately notify the appropriate aircraft operator, the aerodrome operator, the appropriate Police agency and the Authority when any of the following is detected in checked baggage :

(*a*) a loaded fire arm ;

(*b*) an explosive substance, other than ammunition ; or

(*c*) an incendiary device.

Security informations.

17.65. An aircraft operator shall where the Authority provides reasonable notice, provide the Authority,with a written or electronic record or other information relevant to the security of his operations, including :

(*a*) information concerning the method of implementing the security measures that apply to the aircraft operator under 17.4.2 ; and

(*b*) a description of the nature of operations related to a particular flight and the services provided in respect of the flight.

Provision of Information to the Authority on the Security of Operations by service. Providers.

17.66. A person who provides services to an aircraft operator and a person who provides a service related to the transportation of goods by air, shall provide to the Authority, on reasonable notice given by the Authority,writtenorelectronic records or other information relevant to the security of the operations of the aircraft operator, including :

(*a*) information concerning the method of implementing the security measures that apply to those persons under 17.4.2 ; and

(*b*) a description of the nature of the operations related to a particular flight and the services provided in respect of the flight.

17.67. A person authorized to perform screening on behalf of an aircraft operator shall provide to the Authority, on reasonable notice given by the Authority, written or electronic records or other information relevant to the security of his screening operations, including : Provision of Information to the Authority on the Security of Operations by Screening Personnel.

(*a*) information concerning the method of implementing the security measures that apply to it under 17.4.2 ; and

(*b*) a description of the nature of the screening operations related to a particular flight or at aparticular aerodrome.

17.68. Where required by the Authority, an aerodrome operator, aircraft operator, or any other person acting on his behalf, required to conduct screening under a security programme shall use an explosive detection system that has been approved by the Authority to screen checked baggage in accordance with his Aircraft Operator Security Programme, or Aerodrome Security Programme. Use of Explosives Detection Systems.

17.69. CARRIAGE OF PASSENGERS UNDER ADMINISTRATIVE OR JUDICIAL CONTROL

17.69.1. An aircraft operator, when required to carry a passenger who is the subject of judicial or administrative proceedings, shall only do soonce appropriate security controls have been applied to the passenger in question, including notification to the pilot-in-command. Carriage of Passengers under Administra-tive or Judicial control.

17.69.2.—An aircraft operator shall ensure that prior to departure :

(*a*) the aircraft is equipped with adequate restraining devices to be used in the event restraint of any passenger becomes necessary ;

(*b*) each passenger travelling under 17.69.1 has been searched and does not have on or abou this person or property any thing that can be used as a weapon ; and

(*c*) each passenger travelling under 17.69.1 whether under the control of an escort officer or not, under this Regulation, is :

(*i*) boarded before any other passengers when boarding at the aerodrome from which the flight originates and deplaned at the destination after all other deplaning passengers have deplaned ;

(*ii*) seated in the rear-most passengers eat when boarding at the aerodrome from which the flight or iginates ; and

(*iii*) seated in a seat that is not located close to or directly across from any exit.

17.69.3. An aircraft operator operating an aircraft under 17.69.1 shall not :

(*a*) serve food, beverage, or provide eating utensils made of metal to a passenger under such judicial or administrative proceedings while on board such aircraft unless authorized to do so ; or

(*b*) serve any escort officer, or the passenger under the control of the escort officer, any alcoholic beverages while onboard such aircraft.

17.69.4. In cases where an escort officer is a (l), so carried under the provisions of subsection(1), the escort officer shall, at all times, accompany the passenger under his control and keep the passenger under surveillance while on board the aircraft including visits to the lavatory.

17.69.5. This Regulation shall not apply to the carriage of passengers under voluntary protective escort.

17.70. TRAINING

Training.

17.70.1. TheAuthority shall establish, and monitor the implementation of, a written national civil aviation security training programme designed to :

(*i*) clearly describe responsibilities with regards to the selection and training of staff involved in aviation security, to include responsibilities at the national level and/or any responsibilities delegated by the State to entities subject to the National Civil Aviation Security Programme (NCASP) or through contractual agreement ;

(*ii*) Identify all categories of persons who are required to undertake relevant aviation security (AVSEC) training in accordance with assigned duties and objectives ;

(*iii*) Define types of AVSEC training to be provided to the various categories of persons mentioned in (*ii*), including content ;

(*iv*) Establish minimal training content, durations and frequency ;

(*v*) Establish competency testing requirements ; and

(*vi*) Describe the process applied whenever certification is required.

17.70.2. Any person, as signed responsibility for a specific function or task within the national civil aviation security programme, who fails to undergo minimum required security training, to the standard specified in the national civil aviation security training programme, commits an offence under these Regulations.

17.70.3. An aircraft operator shall not use any person as a Security Co-ordinator unless, within the preceding twelve months, such person has satisfactorily completed the required security training specified in his approved Aircraft Operator Security Programme and required by the National Civil Aviation Security Training Programme.

17.70.4. A national aircraft operator shall not use any person as a crew member on any domestic or international flight unless within the preceding twelve months that person has satisfactorily completed the security training required by NCASTP as specified in his approved Aircraft Operator Security Programme and the National Civil Aviation Security Training Programme.

17.71. STANDARDS FOR IMPLEMENTING SECURITY PROGRAMME.

17.71.1.—An aircraft operator, or aerodrome operator, shall ensure that :

Standards for Security Oversight.

(*a*) a person authorized to perform a security related function on his behalf has knowledge of :

(*i*) the provisions of 17.4, applicable security directives and information circulars promulgated pursuant to 17.88 and

(*ii*) elements of the approved Aircraft Operator Security Programme or Aerodrome Operator Security Programme required for the performance of his functions ;

(*b*) the Security Coordinator of the aircraft operator, or aerodrome operator at each aerodrome :

(*i*) reviews daily all security-related functions for effectiveness and compliance with :

(*a*) provision of 17.4 ;

(*b*) the approved Aircraft Operator Security Programme or Aerodrome Operator Security Programme ; and

(*c*) applicable security directives ; and

(*ii*) immediately initiates corrective action for each instance of non-compliance with :

(*a*) provision of 17.4 ;

(*b*) the approved Aircraft Operator Security Programme or Aerodrome Operator Security Programme ; and

(*c*) applicable security directives.

17.71.2. The requirements prescribed under 17.71.1, shall apply to all security-related functions performed for the aircraft operator, or aerodrome operator, whether by his employee or the employee of a contractor.

17.71.3. An aircraft operator, or aerodrome operator, conducting operations in Nigeria shall not use any person to perform any required screening function, unless such person has :

(*a*) a combination of education and experience, which the Authority has determined is necessary for the person to perform his duties and as stipulated in the National Civil Aviation Security Training Programme and National Civil Aviation Security Quality Control Programme ;

(*b*) the following basic aptitudes and physical abilities :

(*i*) the ability to distinguish on the X-ray monitor the appropriate imaging standard specified in his national aircraft operator security programme,or aerodrome security programme including the perception of colours where displayed by the X-ray system ;

(*ii*) the ability to distinguish each colour displayed on every type of screening equipment and explain what each colour signifies ;

(*iii*) the ability to hear and respond to the spoken voice and to audible alarms generated by screening equipment in an active check point environment ;

(*iv*) the ability to efficiently and thoroughly manipulate and handle such baggage, containers, and other objects subject to security processing ; and

(*v*) the ability to have sufficient dexterity and capability to conduct partial and full body searches or hand held metal detector searches in accordance with the guidelines prescribed by the Authority ;

(*c*) the ability to read, write, and speak the English Language well enough to :

(*i*) carry out written and oral in structions in the English Language regarding the proper performance of screening duties ;

(*ii*) read English Language airport restricted area permits, credentials, airline tickets, and labels on items normally encountered in the screening process ;

(*iii*) provide direction to and understand and answer questions from English-Speaking persons under going screening ; and

(*iv*) write incident reports and statements and log entries into security records in the English Language ; and

(*d*) satisfactorily completed all initial, recurrent, and appropriate specialized aviation security training required by the Aircraft Operator Security Programme, Aerodrome Operator Security Programme and the National Civil Aviation Security Training Programme.

17.71.4. An aircraft operator, or aerodrome operator, shall not use a person to perform a screening function after that person has failed an operation al test related to that function, until such person has successfully completed the remedial training specified in his Aircraft Operator Security Programme, or Aerodrome Security Programme, and has passed a re-test related to that function.

17.71.5. An aircraft operator, or aerodrome operator shall ensure that a Security Co-ordinator conducts and documents an annual evaluation of each person assigned screening duties and may continue the employment of that person in a screening capacity only upon the determination by that Security Coordinator that the person :

(*a*) has not suffered a significant diminution of any physical ability required to perform a screening function since the last evaluation of those abilities ;

(*b*) has a satisfactory record of performance and attention to duty ; and

(*c*) demonstrates the current knowledge and skills necessary to courteously, vigilantly, and effectively perform screening functions.

17.71.6. 17.71.1. through 17.71.5. shall not apply to those aviation security screening functions conducted outside Nigeria over which the national aircraft operator does not have operational control.

17.71.7. At locations out side Nigeria where the national aircraft operator has operational control over a screening function, he may use aviation security screeners who do not meet the requirements of 17.71.3 (*c*), provided that at least one of his representatives who has the ability to functionally read and speak the English language is present while the passengers of the aircraft operator are undergoing security processing.

Security Controls over Cargo.

17.72. No aircraft operator shall accept consignments of cargo, courier and express parcels or mail for carriage on passenger flights unless the security of such consignments is accounted for by a regulated agent that is approved by the Authority, or such consignments are subjected to other security controls, that are approved by the Authority, to safeguard such aircraft against an act of unlawful interference.

17.73. AVIATION SECURITY RESPONSIBILITIES OF A REGULATED AGENT.

Aviation Security Responsibilities of a Regulated Agent.

17.73.1. A regulated agent prior to accepting goods for transport in an aircraft shall carry out such security controls as are specified in his approved Regulated Agent Security Programme.

17.73.2. An approved regulated agent who offers goods to an aircraft operator for transport by aircraft shall produce and make available to the aircraft operator, and the Authority on demand, shipping documents, records of goods accepted and offered for air transport, employee training records, airway bills and valid consignment security declarations.

17.74. RESPONSIBILITY OF THE AIRCRAFT OPERATOR RECEIVING GOODS FROM A REGULATED AGENT.

Responsibility of the Aircraft Operator Receiving Goods from a Regulated Agent.

17.74.1. An aircraft operator accepting goods for transport on his aircraft :

(*a*) may conduct screening of such shipments of goods ; and

(*b*) shall ensure :

(*i*) the safeguarding of such goods against unlawful interference until such goods have been placed in the aircraft ;

(*ii*) that his shipments of goods are recorded ; and

(*iii*) that whenever the goods are received from an approved regulated agent such goods are delivered by an authorized employee of such regulated agent.

(*c*) An aircraft operator shall ensure that enhanced security measures are provided to high-risk cargo so as to mitigate threat associated with it

17.74.2. An aircraft operator shall not accept any goods for transport by aircraft unless the documentation for such goods is examined for inconsistencies and is accompanied by a valid consignment security declaration.

17.74.3. An aircraft operator shall not acceptany goods, from a regulated agent, for transport by aircraft unless that regulated agent is an accepted and accredited regulated agent as determined by the Authority.

17.74.4. An aircraft operator shall provide an approved regulated agent with all the necessary information in order that he is able to comply with the Technical Instructions.

17.74.5. An aircraft operator shall make available to the Authority are port of any incident where an airway bill or equivalent document did not provide an accurate record of the goods being offered for air transport.

17.74.6. An aircraft operator, except as provided in the Technical Instructions, shall not place in an aircraft any goods that are not acceptable.

Inspection of Goods Offered for Transport by Regulated Agent.

17.75. INSPECTION OF GOODS OFFERED FOR TRANSPORT BY REGULATED AGENT.

17.75.1. An aircraft operator may in spect any goods or any package, or container having goods offered for transport by air by a regulated agent.

17.75.2. Where an inspection is conducted pursuant to 17.75.1. a regulated agent or a representative of the regulated agent may observe the inspection.

17.75.3. In the absence of a regulated agent, or a representative of a regulated agent, an aircraft operator may use such force as is necessary to access the contents of any package or container containing goods offered for transport by air by such regulated agent, representative of a regulated agent or aircraft operator.

17.75.4. Where an inspection is conducted by an aircraft operator pursuant to 17.75.1. the package, container or goods shall remain in possession of the aircraft operator until after the in spection is complete.

17.75.5. Where an inspection of goods under this Regulation provides evidence of a breach of 17.75, the national aircraft operator shall maintain possession of the goods offered for air transport by a regulated agent and the air way bill and inform the Authority in the prescribed form.

17.76. SCREENING OF CARGO.

Screening of Cargo.

17.76.1. An aircraft operator accepting goods from a consignor, or any authorised representative of the consignor, that is not a regulated agent approved by the Authority, must conduct screening of those goods to determine that they do not contain any weapons, explosives or other dangerous devices, prior to them being carried on any aircraft.

17.76.2. An aircraft operator shall ensure that transfer cargo and mail are subjected to appropriate security controls prior to being loaded on an aircraft a commercial aircraft departing from its territory.

17.72.3 An aircraft operator shall ensure that where screening of cargo and mail is conducted, screening is carried out using an appropriate method or methods, taking into account the nature of the consignment.

17.76.4. An aircraft operator shall establish appropriate mechanisms to confirm that transfer cargo and mail entering its territory has been subjected to appropriate security controls.

17.77. AVIATION SECURITY RESPONSIBILITIES OF A FLIGHT CATERING OPERATOR.

Aviation Security Responsibilities of a Flight Catering Operator.

17.77.1. A flight catering operator prior to accepting raw materials and equipment for preparation as catering supplies for transport in an aircraft shall follow such procedures as are specified in his Flight Catering Operator Security Programme that has been approved by the Authority.

17.77.2. Anapproved flight catering operator who offer scatering stores and supplies to an aircraft operator for transport by aircraft shall produce and make available to the aircraft operator, and the Authority on demand, shipping documents, records of raw materials and equipment accepted and catering stores and supplies offered for air transport, employee training records and other accountable catering documents.

17.78. RESPONSIBILITY OF THE AIRCRAFT OPERATOR RECEIVING CATERING STORESAND SUPPLIES FROM A FLIGHT CATERING OPERATORS.

Responsibility of the Aircraft Operator Receiving Catering Storesand Supplies from a Flight Catering Operators

17.78.1 An aircraft operator accepting catering stores and supplies for transport on his aircraft from an approved flight catering operator shall :

(*a*) ensure that all catering supplies are properly recorded on documentation and are secured through the use of catering seals ;

(*b*) accept the integrity of the catering if he is satisfied the seals and documentation are in order and that the catering shows no signs of being tampered with ;

(*c*) conduct screening of such shipments of catering if the seals and documentation do not match, or if the catering shows any sign of having been tampered with ; and

(*d*) ensure that when ever the catering supplies and stores are received, such catering supplies and stores are delivered by an authorized employee of such approved flight catering operator.

17.78.2 An aircraft operator shall not accept any catering supplies and stores for transport by aircraft unless the documentation for such catering supplies and stores is examined for inconsistencies and is accompanied by avalid security declaration.

17.78.3. An aircraft operator shall not accept any catering supplies and stores, from a flight catering operator, for transport by aircraft unless the flight catering operator is in possession of an approved Flight Catering Operator Security Programme, approved by the Authority.

17.78.4. An aircraft operator shall make available to the Authority a report of any incident where a catering or equivalent document did not provide an accurate record of the catering supplies and stores being offered for air transport.

17.78.5. An aircraft operator, except as provided in the Technical Instructions, shall not place in an aircraft any catering supplies and stores that are not acceptable.

17.78.6. An aircraft operator shall preserve for not less than one year any record of acceptance checklists and in spections carried out under 17.78

1**7.79.** INSPECTION OF CATERING SUPPLIES.

Inspection of Catering Supplies.

17.79.1. An aircraft operator may inspect any catering supplies and stores or any package, or container having catering supplies and stores offered for transport by air by an approved flight catering operator.

17.79.2. Where an inspection is conducted pursuant to 17.79.1, a flight catering operator or a representative of the flight catering operator may observe the inspection.

17.79.3. In the absence of a flight catering operator, or a representative of a flight catering operator, an aircraft operator may use such force as is necessary to access the contents of any package or container containing catering supplies and stores offered for transport by air by such flight catering operator, or representative of a flight catering operator.

17.79.4. Where an inspection is conducted by an aircraft operator pursuant to 17.79.3 the package, container or catering supplies and stores shall remain in possession of the aircraft operator until after the inspection is complete.

17.79.5. Where an inspection of catering supplies and stores under this Regulation provides evidence of a breach of 17.79, the aircraft operator shall maintain possession of the catering supplies and documentation and inform the Authority in the prescribed form.

17.79.6. An airport operator shall ensure that merchandise and supplies introduced into security restricted areas are subjected to appropriate security controls.

17.80. TENANT RESTRICTED AREA SECURITY REQUIREMENTS.

Tenant Restricted Area Security Requirements.

17.80.1. A tenant restricted area (TRA) operator at, or in connection with, any aerodrome, will take such measures as required by the Appropriate aerodrome operator to protect his TRA, and the aerodrome associated with the TRA, to prevent weapons, explosives or any other dangerous devices which may be used to commit an act of unlawful interference, the carriage or bearing of which is not authorized, from being introduced, by any means what so ever, on board an aircraft engaged in civil aviation.

17.80.2. In carrying out the requirements of 17.80.1, a TRA operator will comply with 17.4 and 17.20 of these Regulations, the Appropriate Airport (Restricted Area) Bye-laws inforce, and the terms and conditions of his approved Tenant Restricted Area Operator Security Programme.

17.81. OBJECTIVES AND CONTENT OF QUALITY CONTROL PROGRAMME.

17.81.1. The Authority shall establish, and monitor the implementation of, a written national civil aviation security quality control programme designed to.

Objectives and Content of Quality Control Programme.

17.81.2. The quality control programme shall contain all necessary quality control monitoring measures taken to assess on a regular basis the implementation of the national civil aviation security programme, including the policies on which they are based.

17.81.3. The quality control programme shall be in such form and include such elements as are stipulated within the National Civil Aviation Security Programme (NCASP).

17.81.4. Any person or entity assigned responsibility for a specific function or task with in the national civil aviation security programme, who fails to implement quality control measures, to the standard specified in the national civil aviation security quality control programme, commits an offence under these Regulations.

17.82. COMPLIANCE MONITORING.

17.82.1. The implementation of the national civil aviation security programme shall be monitored by the Authority for compliance by all stake holders.

Compliance Monitoring.

17. 82.2. Monitoring shall be undertaken in accordance with the approved National Civil Aviation Security Quality Control Programme (NCASQCP), taking into consideration the threat level, type and nature of the operations,standard of implementation, and other factors and assessments which will demand for more frequent monitoring.

17.82.3. The management, setting of priorities and organisation of the quality control programme shall be under taken in dependently from the operational implementation of the measures taken under the National Civil Aviation Security Programme (NCASP).

17.82.4. The Authority may in writing require any person who :

(*a*) hold an aviation security programme ; or (*b*) operates, maintains, or services, or does any other act in respect of any aircraft, aeronautical product, aviation related service, air traffic service, or aeronautical procedure, to undergo or carry out such inspections and audits and such monitoring as the Authority considers necessary in the interests of civil aviation security.

17.82.5. The Authority may, in respect of any person described in paragraph (*a*) or paragraph (*b*) of 17.82.4 of this section, carry out such inspections, audits and monitoring as the Authority considers necessary in the interests of civil aviation security.

17.82.6. For the purposes of any in spection, audit or monitoring carried out in respect of any person under 17.82.5 of this section, the Authority may in writing require from that person such information as the Authority considers relevant to the inspection, audit or the monitoring.

17.83. POWER OF INVESTIGATION.

Power of Investigation.

17.83.1. The Authority may, in writing, require any holder of an approved aviation security programme to undergo an investigation conducted by the Authority if the Authority believes, on reasonable grounds, that it is necessary in the interests of civil aviation security, and if the Authority :

(*a*) has reasonable grounds to believe that the holder has failed to comply with any conditions of an aviation security programme ; or

(*b*) considers that the privileges or duties for which the security programme has been approved, are being carried out by the holder in a careless or incompetent manner.

17.83.2. If the Authority requires a holder of an approved security programme to undergo an investigation, the Authority shall :

(*a*) conclude the investigation as soon as practicable ; and

(*b*) inform the holder, in writing, of :

(*i*) the date on which the investigation will begin ; and

(*ii*) the results of the investigation, including :

(*c*) any recommendations arising out of the investigation ; and

(*d*) the grounds for those recommendations.

Power to Suspend Security Programme.

17.84. The Authority may suspend any aviation security programme approved under these Regulations or impose conditions in respect of any such security programme if the Authority considers such action necessary in the interests of security, and if the Authority :

(*a*) considers such action necessary to ensure compliance with these Regulations ;

(*b*) is satisfied that the holder has failed to comply with any conditions of an aviation security programme ; or (*c*) considers that the privileges or duties for which the security programme has been approved are being carried out by the holder in a careless or in competent manner.

17.85. General Power of Entry.

17.85.1. For the purpose of carrying out its functions, duties, or powers under these Regulations, every person duly authorised by the Authority shall have right of access at any reasonable time to the following :

General Power of Entry.

(*a*) any aircraft, aerodrome, building, orplace ; and

(*b*) any document or record concerning any aircraft, aeronautical product, or aviation related service.

17.85.2. Without limiting the power conferred by 17.82.1 of this section, every person duly authorised by the Authority who has reasonable grounds to believe that :

(*a*) any breach of these Regulations is being or about to be committed ;

(*b*) a condition imposed under any civil aviation security programme is not being complied with ; or

(*c*) a situation exists with in the civil aviation system or is about to exist that constitutes a danger to persons or property, may at any reasonable time enter any aircraft, aerodrome, building, or place, and carry out an inspection to determine whether or not a matter referred to in paragraphs (*a*) to (*c*) of 17.85.2 exists.

17.85.3. Every person who is authorized to have access to or to enter any aircraft, aerodrome, building, or place under 17.85.1 or 17.85.2 :

(*a*) shall require any person who is in possession of an aviation security programme, or of any certificate, book, manual, record, list, notice, or other document that is required to be kept under these Regulations, to produce or surrender it ;and

(*b*) shall, if a document is surrendered under paragraph (*a*), inform the relevant aviation document holders orally, as soon as practicable, and in writing that the document has been surrendered.

17.85.4. Every person exercising the power of entry conferred by 17.85.1. or 17.85.2. shall carry a proof of identity and authority, issued by the Authority specifying :

(*a*) the name and the office or offices held by the person ; and

(*b*) that the person is authorised by the Authority to exercise the power conferred by National AVSEC Quality Control Programme (NQCP) to enter aircraft, aerodromes, buildings, and off airport facilities, and to carry out such inspection.

17.85.5. Every person exercising the power of entry conferred by 17.85.1. or17.85.2. shall produce the warrant of authority and evidence of identity :

(*a*) If practicable on first entering the aircraft, aerodrome, building, or off airport facilities ; and

(*b*) When ever subsequently reasonably required to do so.

17.86. SECURITY AUDIT AND INSPECTIONS

Security Audit and Inspections.

17.86.1. An applicant for aviation security programme shallc permit the Authority to carry out security inspection as may be necessary to verify the validity of any application made in accordance with these Regulations.

17.86.2. The holder of an approved aviation security programme shall permit the Authority to carry out security inspection, audit, test and survey as may be necessary to determine compliance with the appropriate requirements prescribed in this Part and for implementation monitoring to verify that the level of security continues to be met.

Protection of sensitive Security Information.

17.87. For the purpose of these Regulations the following information and records containing such information constitute sensitive security information :

(*a*) an approved security programme for an aircraft operator, aerodrome operator, air traffic service provider, regulated agent, air cargo operator, flight catering operator, aviation security service provider, or tenant restricted area operator ;

(*b*) any security programme that relates to transportation by air and any comments, instructions or implementing guidance pertaining there to ;

(*c*) security directives, information circulars and any comments, instructions or implementing guidance pertaining there to ;

(*d*) any profile used in any security screening process, including for persons, baggage or cargo ;

(*e*) any security contingency plan or information and any comments, instructions, or implementing guidance pertaining there to ;

(*f*) technical specifications of any device used for the detection of any deadly or dangerous weapon, explosive, incendiary, or destructive substance ;

(*g*) a description of, or technical specifications of, objects used to test screening equipment ;

(*h*) communication procedures and technical specifications of any security communication equipment ;

(*i*) any information that the Authority has determined may reveal a systemic vulnerability of the aviation system or a vulnerability of aviation facilities, to attack ;

(*j*) information concerning threats against civil aviation released by the Authority ;

(*k*) specific details of aviation security measures whether applied directly by the Authority or regulated parties and includes, but is not limited to, information concerning specific numbers of aviation security officers and aviation security screening officers, deployments or missions, and the methods involved in such operations ;

(*l*) any other information, the disclosure of which the Authority has prohibited ; and

(*m*) any draft, proposed or recommended change to the information and records identified in these Regulations.

17.88. ISSUE OF SECURITY DIRECTIVES

17.88.1. The Authority shall, for the purpose of implementation of any of the Security Programmes required under these Regulations ; issue a security directive to any person to whom 17.88.2 applies requiring him to take such measures as are specified in the directive.

Issue of Security Directives.

17.88.2. This sub-section applies to :

(*a*) the aerodrome operator ;

(*b*) the manager of an aerodrome other than an aerodrome which is principally used by aircraft in military service ;

(*c*) any operator of an aircraft registered or operating in Nigeria ;

(*d*) any person who occupies any land forming part of an aerodrome ;

(*e*) any person who is permitted to have access to a restricted area in an aerodrome for the purposes of the activitie so a business carried on by him ;

(*f*) any person who manages navigational or other aviation related facilities that are important to the continued operation of international civil aviation ; and

(g) any person who carries on a business :

(*i*) which involves handling of any article intended to be carried into an aerodrome for any purpose ;

(*ii*) which involves provision of service by personnel who have access to a restricted area ; or

(*iii*) which, in the opinion of the Authority, otherwise impinges on the security of an aerodrome.

17.88.3. The Authority may, by a security directive :

(*a*) revoke wholly or partly another security directive issued previously ; and (*b*) modify another security directive issued previously in such manner as he thinks fit.

17.89. REQUIREMENTS OF SECURITY DIRECTIVES.

Requirements of Security Directives.

17.89.1. A security directive shall be issued in writing.

17.89.2. A security directive may :

(*a*) be either of a general or of a specific character ;

(*b*) require any measure to be taken, or require any person not to cause or permit anything to be done, at such time and during such period as may be specified in the directive ;

(*c*) required if different measures be taken in relation to different kinds or level of threat specified in the directive ;

(*d*) specify :

(*i*) the minimum number of persons to be employed for the purposes of implementing any measures required to be taken by the person to whom it is issued ;

(*ii*) the manner in which persons employed for such purposes are to be deployed ; and

(*iii*) the qualifications which persons employed for such purposes are to have ; and

(*e*) specify any apparatus, equipment or other aids to be used for such purposes.

17.90. IMPLEMENTATION OF SECURITY DIRECTIVES

Implementation of Security Directives.

17.90.1. Any person who receives a security directive shall :

(*a*) no later than twenty-four hours after delivery by the Authority or within the time prescribed in the security directive, acknowledge receipt of such security directive ;

(*b*) within the time prescribed in such security directive, specify the method by which the aerodrome operator, aircraft operator, air traffic service provider, flight catering operator, aviation security service provider, regulated agent, or tenant restricted area operator has implemented or plans to implement the measures contained in the security directive ; and

(*c*) ensure that information regarding the security directive and measures implemented in response to such security directive are distributed to specified personnel as prescribed in the security directive and to other personnel who require to have such information for the performance of their functions.

17.90.2. In the event that an aerodrome operator, aircraft operator, air traffic service provider, flight catering operator, regulated agent, or tenant restricted area operator is unable to implement the measures contained in the security directive, received under 17.90.1, he shall submit proposed alternative measures, to the Authority within the time frame for compliance prescribed in the security directive.

17.90.3. The Authority shall review alternative measures submitted by the aerodrome operator, aircraft operator, air traffic service provider, flight catering operator, aviation security service provider, regulated agent, or tenant restricted area operator, under 17.90.2. and where the Authority is satisfied that they meet the requirements of the security directive, the Authority shall approve such alternative measures.

17.90.4. The aerodrome operator, aircraft operator, air traffic service provider, flight catering operator, aviation security service provider, regulated agent, or tenant restricted area operator shall implement any alternative measures approved by the Authority under 17.90.3.

17.90.5. Any person who receives a security directive or information circular, under 17.88, shall :

(*a*) restrict the availability of the security directive or information circular and information therein to those persons who require such information for the performance of their functions ; and

(*b*) refuseto release the security directive or information circular and information regarding the security directive or information circular to other persons without the prior written consent of the Authority.

17.91. Objection to Security Directives

Objection to Security Directives.

17.91.1. A person to whom a security directive is issued may serve on the Authority a notice in writing objecting to the directive, on the grounds that the measures specified in the directive :

(*a*) are unnecessary and should be dispensed with ; or

(*b*) are excessively onerous or inconvenient and should be modified.

17.91.2. Where the person to whom a security directive is issued serves a notice under 17.91.1. objecting to the directive, the Authority shall consider the grounds of the objection and, if so requested by the objector, shall afford to him a reasonable opportunity of appearing before and being heard by a public officer appointed by the Authority for this purpose, who shall then decide on the objection by :

(*a*) confirming the directive as originally issued ;

(*b*) confirming the directive subject to one or more modifications specified in the notice served under 17.91.3 ; or

(*c*) with drawing the directive.

17.91.3. A decision under 17.91.2 shall be notified to the object or by the Authority by a notice in writing.

17.92. SEARCH OF PERSONS AND GOODS

Search of Persons and Goods.

17.92.1. A person who, prior to entering a restricted area, enhanced security restricted area or sterile area is required by an aviation security officer or aviation security screening officer :

(*a*) to submit to a search of his person ;

(*b*) to permit a search to be carried out of the goods that such person intends to take or have placed on board an aircraft or take into a restricted area ; or

(c) to submit to a search of a vehicle or other means of conveyance, under his control, shall not board, and shall not be allowed to board the aircraft, or enter the restricted area, enhanced security restricted area or sterile area unless he submits to a search or permits as earch to be carried out, as the case may be.

17.92.2. Where a person is given an order by an aviation security officer or aviation security screening officer pursuant to 17.92.1 the person shall there upon leave the restricted area, enhanced security restricted area or sterile area immediately and remove the goods, vehicle or means of conveyance in his possession from the restricted area, enhanced security restricted area or sterile area.

17.92.3. A person under 17.92.1 or 17.92.2 who is requested to leave a restricted area, enhanced security restricted area or sterile area shall beescorted out of such restricted area, enhanced security restricted area or sterile area by an aviation security officer or aviation security screening officer.

17.93. PASSENGERS AND MEMBERS OF THE PUBLIC

Passengers and Members of the Public.

17.93.1. A person shall not carry, or attempt to carry, weapons, prohibited items or other dangerous devices not authorized for transport, in carry-on baggage or in hold baggage, on board an aircraft.

17.93.2. A person shall not make a false statement to an aviation security officer, an aviation security screening officer, an aircraft operator, or a member of the Nigerian Police assigned to aerodrome duties, in regard to possession of a weapon, incendiary device or any other dangerous device.

17.93.3. A person shall not enter or remainin any part of an aerodrome that is not a public area where a notice is given orally by the aerodrome operator, aerodrome tenant, aircraft operator or by a posted sign stating that trespassing is prohibited, or that entry is restricted to authorized persons as stipulated in the appropriate Airport Bye-laws.

17.93.4. Wherea person has been ordered to disembark an aircraft in accordance with 17.40, he shall disembark the aircraft and remove his carry-on baggage and have his checked baggage removed from the aircraft.

17.94. ACCESS TO AERODROME RESTRICTED AREAS

17.94.1. A person shall be allowed access to aerodrome restricted areas in accordance with the requirements of the appropriate Airport (Restricted Area) Bye-laws.

Access to Aerodrome Restricted Areas.

17.94.2. A person,who has been granted access to a restricted area of an aerodrome, shall only access or attempt to access such restricted area at a designated restricted area access control point.

17.94.3. A person may enter certain restricted areas of an aerodrome where such person :

(*a*) has a valid boarding pass issued by an aircraft operator, is proceeding to the assigned gate for the purpose of boarding an aircraft and has been subject to the screening requirements of these Regulations ;or

(*b*) he/she is identified in the emergency response plan of the aerodrome operatorandisattendingtoanaerodromeemergency

17.94.4. Subject to 17.94.3 a person shall not :

(*a*) provide another person with physical access to a restricted area where the latter has not been issued with a restricted area permit ; or

(*b*) assistant other person in gaining physical access to a restricted area where the latter has been issued a restricted area permit but does not have such restricted are a permit in his possession.

17.95. No person shall enter an enhanced security restricted area or a sterile area unless he has been screened and cleared for entry by an aviation security officer or aviation security screening officer.

Restriction on Entry into Enhanced Security Restricted areas and sterile area.

17.96. No person shall enter an enhanced security restricted area or sterile area without submitting to the screening of his person and property in accordance with the procedures being applied to control access to that area under 17.48.

Submission to Screening.

17.97. UNRULY PASSENGER.

17.97.1 Any passenger who becomes unruly at the airport terminal or on board an Aircraft commits an offence.

Unruly Passenger.

17.97.2. The word "*unruly*" as used in this section refers to but is not limited to, the following acts :

(*a*) Smoking on board an aircraft or in a non-smoking area of the terminal building ;

(*b*) Use of mobile phones and/or other communication/electronics gadgets on board an aircraft without the approval of the aircraft commander ;

(*c*) Fighting or other disorderly conduct on board an aircraft or at the terminal building ;

(*d*) Any conduct/act constituting a nuisance to other passengers ;

(*e*) Disobedience of lawful instructions issued by the aircraft commander, flight crew, cabin attendants, check-instaff and/or security screening staff ;

(*f*) Any conduct that endangers or is likely to endanger the safety of flight operations ;

(g) Tampering with smoke detectors and other aircraft equipment.

17.97.3. Where any passenger becomes unruly on board an aircraft or at the terminal building, the aircraft commander or airport authority shall take necessary measures including restraint where necessary :

(*a*) to protect the safety of the aircraft, terminal building or of persons or property therein, or

(*b*) to maintain good order and discipline on board or at the terminal building ; and

(*c*) to enable him deliver such person to competent authorities.

Contingency Plan.

17.98. CONTINGENCY PLAN

17.98.1. The Authority shall ensure Contingency plans are developed and resources to safeguard civil aviation against acts of unlawful interference are made available.

17.98.2. The contingency plans shall be tested on a regular basis.

Requirements for approvals, authorisations and certificates.

17.99. REQUIREMENTS FOR APPROVALS, AUTHORISATIONS AND CERTIFICATES.

17.99.1. *Approvals* — The Authority may grant the following Approvals to an applicant who satisfactorily accomplishes the requirements stated in the National Civil Aviation Security Programme for the approval sought.

(*i*) Aviation Security Service Provider.

(*ii*) Aviation Security Training Provider.

17.99.2. *Authorisations* — The Authority may grant the following authorisations when an applicant satisfactorily accomplishes the requirements stated in the National Civil Aviation Security Training Programme for the authorisation sought :

(*i*) AVSEC Instructors authorisation.

(*ii*) AVSEC National Inspectors authorisation.

17.99.3. *Certificates* — The Authority may issue the Aviation Security Screeners certificate when an applicant satisfactorily accomplishes the requirements stated in the National Civil Aviation Security Training Programme for the certificate sought.

17.99.4. *Validity of Approvals, Authorisations and Certificates*

(*a*) The Authority will issue or renew an approval, authorisation and certificate when the applicant complies with the requirements of the NCASP and/or NCASTP.

(*b*) Privileges—

(*i*) The holder of an approval, authorisation or certificate shall not exercise privileges other than those granted by the approval, authorisation and certificate ;

(*ii*) The privileges granted by an authorisation and certificates, may not be exercised unless the holder maintains competency and meets the requirements for recent experience as stipulated in the NCASP and/or NCASTP.

(*c*) The validity period of an approval, authorisation and certificate is two (2) years.

(*d*) Medical Fitness : A medical examination may be conducted by the NCAA Medical assessor or a designated AAME.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 18—AIR TRANSPORT ECONOMIC REGULATIONS

INTRODUCTION

Part 18 provides for the rules governing the administration, certification, licensing, permits, registration and audit procedures of economic air transport activities. It also incorporates relevant guidelines contained in ICAO Guidance Materials as well as best practices.

The part deals with Air Transport Licensing, Domestic Operations, Regional and International Operations by Nigerian Carriers, Foreign Airline Operations into and out of Nigeria ,Air Services Agreement, Airport and Air Navigation Services, Facilitation of Air Transport, Allied Aviation Services, Travel Agency, Airline Financial Health, Aviation Insurance, Civil Aviation Fees, Air Transport Statistics, Fares and Tariff, Unfair Methods of Competition and Anti-competitive Practices.

B 2496

NIGERIA CIVIL AVIATION REGULATIONS

PART 18—AIR TRANSPORT ECONOMIC REGULATIONS

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IS:18.9.1.2.(*iv*)(*a*)	Requirements for the Registration of Cargo Agents or Air Freight Forwarders.
IS:18.9.1.2. (*iv*)(*b*)	Requirements for the Renewal of Registration of Cargo Agents or Air Freight Forwarders.
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NIGERIA CIVIL AVIATION REGULATIONS

PART 18—AIR TRANSPORT ECONOMIC REGULATIONS

18.1. General

18.1.1. Applicability.

18.1.1.1. This part shall apply to : Applicability.

(*i*) Licensing of scheduled, non scheduled air transport operations, non-commercial private flight operations and conduct of foreign airline operations.

(*ii*) Economic monitoring of airlines, aerodromes, air navigation services and other aviation and allied aviation service providers.

(*iii*) Billing, invoicing, payment and reconciliation arising from commercial agreement.

(*iv*) Regulation of Aviation charges and other related charges by aerodrome operators, air navigation, meteorological and other allied service providers.

(*v*) Facilitation of Air Transport.

(*vi*) Certification, Licensing of and the setting and monitoring of Standards and Service Level Agreement (SLA) by ground handling service providers, Catering, Travel Agency, Cargo Agents, Air Freight Forwarders Agents of Foreign Airlines and other related allied aviation service providers.

(*vii*) Adequacy and validity of insurance cover for airlines, aerodrome operators and allied aviation service providers.

(*viii*) Civil aviation fees and Air Transport Statistics.

(*ix*) Anti-competition rules and Airline Fares and Tariffs.

18.1.2. For the purpose of this part, the following definitions shall apply : Definitions.

(1) "*Act*" means the Civil Aviation Act, 2006 or/and any subsequent amendments thereto.

(2) "*Aerial Work*" means an aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

(3) "*Aerodrome*" means a defined area on land or water (including any building, installations and equipment) intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

(4) "*Aerodrome Operator*" means the owner or provider of an aerodrome that is certified for operation by the Authority.

(5) "*Aerodrome Control Service*'' means air traffic control service for aerodrome traffic.

(6) "*Aeronautical Charges*" means charges for aeronautical services levied in line with ICAO Policies and Principles.

(7) "*Aeronautical Authority*" means the minister responsible for aviation and any person or body authorized to perform any function at present performed by the said minister or similar function.

(8) "*Agent of Foreign Airlines*" means an individual or corporate body that is in the business of obtaining flight clearances, flight plans, and provides ground transportation, fuelling of aircraft and hotel accommodation on behalf of non- scheduled (*adhoc*) airlines or aircraft operators.

(9) "*Aircraft*" means any machine that can derive support in the atmosphere from reactions of the air other than reactions of the air against the earth surface.

(10) "*Air Carrier*" means an enterprise that engages in provision of transportation services by aircraft for remuneration or hire.

(11) "*Aircraft Movement*" means the number of arrivals and departures of aircraft into and out of an airport.

(12) "*Air Freight Forwarders*" means any person or company who arranges the carriage or movement of air-freighted goods and associated formalities on behalf of an importer or exporter at the international boundary of cargo airports.

(13) "*Airlines*" means any air transport enterprise offering or operating a scheduled international air service.

(14) "*Air Operator*" means any organization which undertakes to engage in domestic commercial air transport or international commercial air transport, whether directly or indirectly or by a lease or any other arrangement.

(15) "*Air Service*" means any service performed by any aircraft for hire or reward.

(16) "*Air Transport Licensing Committee*" means NCAA Management responsible for considering and approving/disapproving of requests for Licences and Permits. The Committee is chaired by the Director General.

(17) "*Air Navigation Services*" include air traffic management (ATM), communication, navigation and surveillance systems (CNS), meteorological services for air navigation (MET), search and rescue (SAR) and aeronautical information services (AIS). These services are provided to air traffic during all phases of operations (approach, aerodrome control and en route).

(18) "*Air Navigation Services Provider*" means an independent entity established for the purpose of operating and managing air navigation services and empowered to manage and use the revenues it generates to cover its costs.

(19) "*Airport Phase Operations"* means any or all phases of aircraft operations involving approach, landing take off and/or departure.

(20) "*Air Traffic Control Services*" means a service provided for the purpose of :

(*a*) preventing collisions ;

(*i*) between aircrafts ; and

(*ii*) on the maneuvering area between aircrafts and obstructions ; and

(*b*) expediting and maintaining an orderly flow of air traffic.

(21) "*Air Traffic Management* (*ATM*)'' means the aggregation of the airborne functions and ground-based functions (air traffic services, air space management, and air traffic flow management) required to ensure the safe and efficient movement of aircraft during all phases of operations.

(22) "*Air Traffic Service (ATS)*'' means a generic term meaning variously, flight information service, alerting service, air traffic advising service , air traffic control service (area control service, approach control service or aerodrome control service).

(23) "*Alerting Service"* means a service provided to notify appropriate organizations regarding aircrafts in need of search and rescue aid, and assist such organization as required.

(24) "*Anti-Competitive"* means an apparent intent or the probable effect of crippling, excluding or driving another airline or service provider from the market, with a behavior/practice which indicates an abuse of dominant position by an airline in the market.

(25) "*Audited Financial Statement*" means a report on the financial position or operations of a company that has been certified by an independent auditor.

(26) "*Authority*" means the Nigerian Civil Aviation Authority.

(27) "*Aviation Fuel Supplier"* means a person responsible for the supply and distribution of aviation fuel to the aircraft and reservoir in and within the airport area.

(28) "*Amortization*'' means a gradual extinguishment of the cost of an asset by periodic (annual) charges to expenses, usually applicable to intangible assets.

(29) "*Annex*" means international standards and recommended practices adopted in accordance with the Convention and any amendment of the Convention or of such Annex which is made in accordance with the Convention.

(30) "*Approach Control Service*" means air traffic control service for arriving or departing control flights.

(31) "*Area Control Service*'' means air traffic control service for controlled flights in control areas (en routes).

(32) "*Assessment*" means an initial evaluation of a complaint by the Authority to determine the appropriate means of redress.

(33) "*Asset*" means a resource from which future economic benefits are expected to flow to the entity that owns or controls it.

(34) "*Autonomous Entity*" means an independent entity established for the purpose of operating and managing one or more airports and/or air navigation services, which is empowered to manage and use the revenues it generates to cover its costs.

(35) "*Baggage*" means personal property of passengers or crew carried on an aircraft by agreement with the operator.

(36) "*Balance Sheet*" means a statement indicating as of a specific date the assets owned by a company, the liabilities owed to others, and the accumulated investments of its owners.

(37) "*Bilateral Air Services Agreement*" means an air services agreement on air transportation subsisting between Nigeria and any other country.

(38) "*Cancellation*" means the non-operation of a flight which was previously planned and on which at least one seat was reserved.

(39) "*Capacity*" means the quantitative measure of air transport services offered or proposed to be offered by one or more air carriers in a city-pair or country-pair market or over a route. It may be expressed in aircraft size, number of seat or tonne available in an aircraft.

(40) "*Cargo*" means any property carried on an aircraft other than mail, stores and accompanied or mishandled baggage.

(41) "*Cargo Agent*" means an individual or corporate body appointed by an airline to solicit and process air freight shipment.

(42) "*Charge*'' means a levy that is designed and applied specifically to recover the cost providing facilities and services for civil aviation.

(43) "*Chicago Convention*" means the convention on International Civil Aviation concluded at Chicago on the 7th December 1944.

(44) "*Combined Single Limit*" means a liability policy commonly offering separate limits that apply to bodily injury claims and to claims for property damage expressed as a single sum coverage or as a limit per occurrence.

(45) "*Commercial Agreement*" means an Agreement between two designated airlines, wherein an airline of one of the contracting States, on

application to the other State, is granted extra BASA rights to operate additional flights (more than those specified in the BASA) to the point(s) of entry into the conceding States.

(46) "*Commercialization*'' means an approach to management of facilities and services in which business principles are applied or emphasis is placed on development of commercial activities.

(47) "*Compensation*'' means direct and/or indirect monetary and/or non-monetary benefits offered to passengers whose rights have been infringed upon.

(48) "*Concerted Practice*" means a practice involving direct or indirect contacts between competitors falling short of an actual or formal agreement.

(49) "*Complainant*" means :

(*a*) An air passenger ;

(*b*) one or more air passengers, where there are numerous air passengers having the same interest ; or

(*c*) in case of the death of an air passenger, his legal heirs or representatives making or continuing a complaint.

(50) "*Complaint*" means an allegation in writing made by an air passenger, a group of passengers or their legal heirs or representatives.

(51) "*Confirmed Reserved Seat*" means space on a specific date and on a specific flight and class of service of an air carrier which has been requested by a passenger, including a passenger with a ''zero fare ticket,'' and which the air carrier or its agent has verified, by appropriate notation on the ticket or in any other manner provided therefore by the air carrier, as being reserved for the accommodation of the passenger.

(52) "*Consumer*" means consumer of civil aviation services.

(53) "*Contracting States*" means all member countries of the International Civil Aviation Organization (ICAO).

(54) "*Denied Boarding*" means a refusal by an airline to carry passengers who hold confirmed reservation and valid travel documentation, although they have presented themselves for check-in and/or boarding at the time stipulated by the airline,on grounds of overbooked flight.

(55) "*Director-General*'' means the Director-General of the Nigerian Civil Aviation Authority (NCAA).

(56) "*Direct Operating Cost (DOC)*" means expenditure that is directly related to flight operation, such as flight crew allowance, aircraft fuel and oil, lease rental or deprecation, aircraft maintenance, insurance premium,

ground handling, navigational charges, landing and parking charges and in-flight catering service.

(57) "*Disembarkation*" means the leaving of an aircraft after landing, except by crew or passenger continuing on the next stage of the same through-flight.

(58) "*Embarkation*" means the boarding of an aircraft for the purpose of commencing a flight, except by such crew or passengers as have embarked on a previous stage of the same through-flight.

(59) "*Exclusive Dealing*" means any practice whereby a supplier of products or services :

(*a*) as a condition of supplying the products or services to a customer or travel agent requires the customer to :

(*i*) deal only or primarily in products or services supplied by or designed by the supplier or its nominee, or

(*ii*) refrain from dealing in a specified class or kind of products or services except as supplied by the supplier or his nominee ;

(*b*) induces a customer to meet a condition referred to in paragraph (*a*) by offering to supply the products or services to the customer on more favourable terms or conditions if the customer agrees to meet that condition.

(60) "*Extraordinary Circumstances*" means any mechanical, technical, operational, climatic, sociopolitical or any other conditions beyond the actual control of the party involved.

(61) "*Facilitation* (*FAL*)" means the efficient management of control processes, to expedite clearance and prevent unnecessary delays at the airports.

(62) "*Fare*" means the price paid for air transportation including all mandatory taxes and fees. It does not include ancillary fees for optional services.

(63) "*Federal Gazette*" means the official *gazette* of the Federal Republic of Nigeria.

(64) "*Final Destination*" means the destination on the ticket presented at the check-in counter or, in the case of directly connecting flights, the destination of the last flight.

(65) "*Fixed Costs*'' means costs which in the short term remain unchanged regardless of whether or not the volume of services provided increases or decreases.

(66) "*Flight Information Region*'' means an airspace of defined dimensions within which flight information service and alerting service are provided.

(67) "*Flight Information Service"* means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

(68) "*Foreign Aircraft*" means an aircraft other than a Nigerian registered aircraft.

(69) "*General Aviation Operation*" means an aircraft operation other than a commercial air transport operation or an aerial work operation.

(70) "*Ground Equipment*" means an article of a specialized nature for use in the maintenance, repair and servicing of an aircraft on ground, including testing equipment and cargo and passenger-handling equipment.

(71) "*Ground Handling Company*" means anyone that carries out the variety of activities before and after a flight to ensure the safe and smooth process of passengers, baggage, cargo, mail and other materials associated with their transportation by air.

(72) "*Indirect Operating Cost* (*IOC*)" means expenditure incurred from items utilized for the support of airline business that vary from one airline to another such as staff salaries, training, ticketing and reservation, sales promotion, vehicles, maintenance, rent, travels, ICT, etc.

(73) "*In-flight Catering Service Provider*" means a person or corporate body that engages in the planning and preparation of meals and assembly of meal trays designed to be served on board an aircraft.

(74) "*Insurance*" means a contract (policy) in which an individual or entity receive financial protection or reimbursement against an insurance company.

(75) "*International Airport*" means any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

(76) "*Lease*'' means A contract by which a rightful possessor of real property conveys the right to use and occupy the property in exchange for consideration usually rent.

(77) "*nsurance Liability*'' means maximum amount of coverage available under a liability insurance policy.

(78) "*Liability"* means debt of the entity in the form of financial claims on an entities assets.

(79) "*Licence*" means a licence granted under section 32 of the Civil Aviation Act, 2006.

(80) "*Mail*" means dispatches of correspondence and other items tendered by and intended for delivery to postal services in accordance with the rules of the universal postal union.

(81) "*Market Restriction*" means any practice whereby a supplier of products or services, as a condition for supplying them to a customer, requires that customer to supply any product or service only in a specified area or exacts a penalty of any kind from the customer if the customer supplies any products or services outside a specified area.

(82) "*Minister*" means the Minister responsible for civil aviation.

(83) "*Mishandled Baggage*" means baggage voluntarily or inadvertently, separated from passenger or crew.

(84) "*Non-Aeronautical Charges*" means charges levied by an airport in consideration for the various commercial arrangements it makes in relation to the granting of concessions, the rental or leasing of premises and land, and free- zone operations, even though such arrangements may in fact apply to activities which may themselves be considered to be of an aeronautical character.

(85) "*Non-Scheduled Operations*" means journeys undertaken other than scheduled operations.

(86) "*Officer*" means a Director, General Manager, Secretary or other similar officer and includes any person who purports to act in any such capacity.

(87) "*Package*" means tour, travel or holiday services provided by a tour operator which is marketed or advertised as an all-inclusive trip including transport, accommodation and/or other trip expenses at an inclusive or special price.

(88) "*Passenger*" means a person in whose name a ticket and or a reservation is made and or confirmed and who is eligible to travel upon the stated flight pursuant to that ticket whether the ticket is purchased by the person or not and whether the ticket is a zero fare ticket or other ticket for which no fees or fare is paid.

(89) "*Passenger Traffic*" means number of passenger embarkation and disembarkation.

(90) "*Permit*" means a permit granted under Section 32 (1) of the Civil Aviation Act, 2006.

(91) "*Person*" means any individual, firm, partnership, corporation, company association, joint state association or body politic and includes any trustee, receiver, assignee, or other similar representative of their entities.

(92) "*Person with Disabilities*" means any person whose mobility is reduced due to physical incapability (sensory or locomotor), an intellectual

deficiency, age, illness, or any other cause of disability when using transport and whose situation needs special attention and the adaptation to the person's needs of the services made available to all passengers.

(93) "*Profit and Loss Account*" means a financial statement that summarizes the financial transactions for a business over a period in time. It shows revenue, expenditure and the profit and/or loss resulting from operations for a given 'financial year'.

(94) "*Relevant Market*" refers to the area of effective competition within which an airline or service provider operates and includes geographic area, route, substitutability, close competitors, and such other factors that may affect consumer choice.

(95) "*Reservation/Bookings*" means allotment in advance of seating or sleeping accommodation for a passenger or of a space or weight capacity for baggage.

(96) "*Revenue*" means Inflows of cash or increases in other assets or settlement of liabilities during a period from delivering or rendering services or performing other activities that constitute the entity in major operations.

(97) "*Royalty*" means an amount in money accruing to the country through commercial agreements subsisting with other foreign airlines.

(98) "*Scheduled Operations*" means any operation that offers air transport service on a published time-table and open to use by the general public.

(99) "*Special Drawing Right (SDR)*" means an international foreign exchange reserve assets, allocated to nations by the International Monetary Fund (IMF) and represents a claim to foreign currencies for which it may be exchanged in times of need.

(100) "*Statistics*" means the collection and provision for exchange of airline traffic data related to the agreed services, either periodically or as needed for the regulation of capacity, route evaluation, or other purposes.

(101) "*Tariff*" means a schedule of fares, rates, charges and terms and conditions of carriage applicable to the provision of an air service and other incidental services.

(102) "*Ticket*" means a valid document giving entitlement to transport, or something equivalent in paperless form, including electronic form, issued or authorized by the air carrier or its authorized agent.

(103) "*Tied Selling*" means any practice whereby a supplier of products or services :

(*a*) as a condition of supplying the products or services (hereinafter referred to as the "tied products") to a customer, requires the customer to :

(*i*) acquire any other products or services from the supplier or nominee,

(*ii*) refrain from using or distributing, in conjunction with the tied products or services, any other products or services that are not of a brand designated by the supplier or the nominee ; and

(*b*) induces a customer to meet a condition set out in paragraph (*a*) by offering to supply the tied products or services to the customer on more favourable terms or conditions if the customer agrees to meet that condition.

(104) "*Third Party*'' means an individual or entity not party to an Agreement but with an interest in the Agreement.

(105) "*Third Party Claim*" means claims for injury or damage to property of a third party alleged to have been caused by the acts or omission of the insured.

(106) "*Tour Operator*" means, with the exception of an air carrier, an organizer of package travel, package holidays and package tours.

(107) "*Traffic Rights*" means privilege to take on and put down traffic loads (passengers, cargoes and mails) from one point to the other between two countries for hire or reward.

(108) "*Travel Agent*" means one who assists travelers by sorting through vast amounts of information to help their clients make the best possible travel arrangements.

(109) "*User Charge*" means any fee or levy payable by users for the consumption of any service.

(110) "*Unaccompanied Baggage*" means baggage that is transported as cargo and may or may not be carried on the same aircraft with the person to whom it belongs

(111) "*Unclaimed Baggage*" means baggage that arrives at an airport and is not picked up or claimed by a passenger.

(112) "*Unidentified Baggage*" means baggage at an airport, with or without a baggage tag, which is not picked up by or identified with a passenger.

(113) "*Volunteer*" means a person who willingly responds to the air carrier's request to relinquish his confirmed reserved seat and accept the air carriers' offer of compensatory benefits, in exchange.

(114) "*Zero Fare Ticket*" means a ticket acquired without a substantial monetary payment such as by using frequent flyer miles or vouchers, travel vouchers or a consolidator ticket obtained after a monetary payment that

does not show a fare amount on the ticket. A zero fare ticket does not include free or reduced rate air transportation provided to airline employees and guests.

18.1.2.2. Every other term not defined herein shall have the same meaning as contained in the Act and the Chicago Convention and its Annexes.

18.1.3. ABBREVIATIONS

18.1.3.1. The following abbreviations are used in these Regulations are :

1. ACS - Area Control Service
2. ACP - Air Carrier Permit
3. ATL - Air Transport Licence
4. ATM - Air Traffic Management
5. ATS - Air Traffic Services
6. AOP - Airline Operating Permit
7. AOC - Air Operator's Certificate
8. ATOL - Air Travel Organizer's Licence
9. ATLC - Air Transport Licensing Committee
10. API - Advanced Passenger Information
11. AVSEC - Aviation Security
12. BASA - Bilateral Air Services Agreement
13. CSL - Combined Single Limit
14. DGR - Dangerous Goods Regulation
15. DSS - Department of State Security Service
16. FCOP - Foreign Carriers' Operating Permit
17. FIR - Flight Information Region
18. FIS - Flight Information Service
19. GSA - General Sales Agent
20. IS - Implementing Standard
21. LAR - Life Animal Regulation
22. MTOW - Maximum Take-off Weight
23. NANTA - National Association of Nigerian Travel Agents
24. NCASP - National Civil Aviation Security Programmme
25. NDLEA - National Drug Law Enforcement Agency
26. Nig. CARs - Nigeria Civil Aviation Regulations
27. NIPOST - Nigerian Postal Services
28. NNFP - Nigerian National Facilitation Programme

29.	PNCF	-	Permit for Non-Commercial Flights
30.	PAAS	-	Permit for Aerial Aviation Services
31.	PHS	-	Personal History Statement
32.	PRM	-	Person with Reduced Mobility
33.	SLA	-	Service Level Agreement
34.	SDR	-	Special Drawing Right
35.	TSC	-	Ticket Sales Charge

18.2. AIR TRANSPORT LICENSING

Licences and Permits.

18.2.1. This subpart prescribes the types of licences, permits and/or any other authorization for scheduled and non-scheduled flight operations.

Licences for Scheduled Domestic Flight Operations.

18.2.2. This section shall apply to the carriage of passengers, mail and cargo by air for hire and reward in public transport category.

18.2.2.1. No person shall engage in scheduled air transport business in Nigeria for the carriage of passengers, mail or cargo for hire and reward in public transport category between two or more places in Nigeria unless such a person holds an Air Transport Licence (ATL) issued by the Authority and operates in accordance with its provisions.

18.2.2.2. An application for the grant or renewal of an ATL shall be made in writing to the Authority and shall meet the requirements as specified in IS:18.2.2.2 (A) and IS:18.2.2.2 (B) and as may be published by the Authority from time to time.

18.2.2.3. The Authority if satisfied that the applicant has met and complied with the requirements for the grant or renewal of an ATL shall grant or renew the licence.

18.2.2.4. An ATL shall be valid for a period of five (5) years and subject to renewal every five years and on such terms and conditions as may be specified by the Authority from time to time.

18.2.2.5. An ATL not utilized at the expiration of its validity period shall not be renewed by the Authority, notwithstanding, the holder of the ATL may apply for a fresh issuance.

18.2.2.6. The holder of an ATL shall continue to be in a position to demonstrate to the Authority its ability to meet the conditions set forth in the ATL.

18.2.2.7. If on the date of the expiration of a licence, an application for renewal is pending with the Authority, the expiring licence may continue in force under such terms and conditions as may be prescribed by the Authority. This provision shall only apply if all the required documents for renewal of the licence have been submitted to the Authority and the delay in the renewal of the ATL is occasioned by a third party.

18.2.2.8. Each holder of an ATL shall submit to the Authority annually or, at such times as the Authority may deem fit, a list showing the names of its shareholders or any person(s) holding more than five percent (5%) shareholding in the company together with the names of any person on whose behalf such shares are held.

18.2.2.9. Each holder of an ATL shall file with the Authority, a true copy of every contract or agreement affecting air transportation or any modification or cancellation thereof, between the air carrier and any other air carrier or other bodies. The Authority may disapprove of such contract or agreement whether or not previously approved if found to be in violation of these regulations, rules and orders made by the Authority or against public interest.

18.2.2.10. The Authority may suspend or revoke an ATL if the holder of the ATL contravenes any of the provisions of the Civil Aviation Act, these regulations, rules and orders made thereunder and any such condition subject to which the ATL was granted.

18.2.2.11. If the Authority decides to suspend or revoke any ATL the Authority shall :

(*a*) Give a written notice to the holder of the ATL specifying the violation(s) ;

(*b*) Specify in the written notice the right of the holder of the ATL to make representations in writing regarding the alleged violation(s) within thirty (30) days of the receipt of the written notice from the Authority ;

(*c*) Upon receipt of the representations from the holder of the ATL, the Authority shall make an evaluation and inform the holder of the ATL of its determination ;

(*d*) Notwithstanding the above, the Authority may by written notice, convey to the holder of the ATL its decision to suspend the ATL if it is in the interest of safety.

18.2.2.12. The Authority shall publish for the information of the general public, its decision regarding an application for suspension or revocation of an ATL.

18.2.2.13. An ATL shall not be granted or renewed without a security clearance issued by the Government of the Federal Republic of Nigeria.

18.2.3. This section shall apply to the carriage of passengers, mail and cargo by air for hire and reward in public transport category on non-scheduled or charter basis. Airline Operating Permit (AOP).

18.2.3.1. No person shall use any aircraft in Nigeria for hire and reward in public transport category to provide non-scheduled or charter air service unless such a person holds an ATL or Airline Operating Permit (AOP) issued by the Authority.

18.2.3.2. Application for the grant or renewal of an AOP shall be made in writing to the Authority and shall meet the requirements as specified in IS:18.2.3 (A) and IS:18.2.3 (B) or such other information as may be published by the Authority from time to time.

18.2.3.3. The Authority if satisfied that the applicant has met and complied with the requirements for the grant or renewal of an AOP shall grant or renew the permit.

18.2.3.4. An AOP shall be valid for a period of three (3) years and subject to renewal every 3 years on such terms and conditions as may be specified by the Authority from time to time.

18.2.3.5. An AOP not utilized at the expiration of its validity period shall not be renewed by the Authority, notwithstanding, the holder of the AOP may apply for a fresh issuance.

18.2.3.6. The holder of a permit granted by the Authority under this regulation shall at all times be in a position to demonstrate the ability to meet the conditions as set forth in the AOP.

18.2.3.7. If at the expiration of an AOP, an application for renewal is pending with the Authority, the expiring AOP may continue in force under such terms and conditions as prescribed by the Authority. This provision shall only apply if all the required documents for renewal of the AOP have been submitted to the Authority and the delay is occasioned by a third party.

18.2.3.8. Each holder of an AOP shall submit to the Authority annually or at such times as the Authority may deem fit, a list showing the names of its shareholders or any person(s) holding more than five percent (5%) shareholding in the company together with the names of any person on whose behalf such shares are held.

18.2.3.9. Each holder of an AOP shall file with the Authority, a true copy of every contract or agreement affecting air transportation or any modification or cancellation thereof, between the air carrier and any other air carrier or other bodies. The Authority may disapprove of such contract or agreement whether or not previously approved if found to be in violation of these regulations, rules and orders made by the Authority or against public interest.

18.2.3.10 The Authority may suspend or revoke an AOP if the holder of the AOP contravenes any of the provisions of the Civil Aviation Act, these regulations, rules and order made thereunder and any such condition subject to which the AOP was granted.

18.2.3.11. If the Authority decides to suspend or revoke any AOP, the Authority shall :

(*a*) give a written notice to the holder of the AOP specifying the violation(s) ;

(*b*) Specify in the written notice the right of the holder of the AOP to make representations in writing regarding the alleged violation(s) within thirty (30) days of the receipt of the written notice from the Authority ;

(*c*) Upon receipt of the representations from the holder of the AOP, the Authority shall make an evaluation and inform the holder of the AOP of its determination ; and

(*d*) Notwithstanding the above, the Authority may by written notice, convey to the holder of the AOP its decision to suspend the AOP if it is in the interest of safety.

18.2.3.12. The Authority shall publish for the information of the general public, its decision regarding an application for suspension or revocation of an AOP.

18.2.3.13. An AOP shall not be granted or renewed without a security clearance issued by the Government of the Federal Republic of Nigeria.

Permit for Non-Commercial Flight Operations (PNCF).

18.2.4. This section shall apply to flight operations undertaken for non-commercial or private purposes :

18.2.4.1. No person shall use any aircraft for non-commercial purposes between two or more places in Nigeria, unless such a person holds a Permit for Non-Commercial Flights (PNCF) issued by the Authority.

18.2.4.2. Application for the grant or renewal of a PNCF shall be made in writing to the Authority and shall meet the requirements as specified in IS:18.2.4(A) and IS:18.2.4(B) or such other information as may be published by the Authority from time to time..

18.2.4.3. The Authority if satisfied that the applicant has complied with the requirements for the grant or renewal of the PNCF, shall grant or renew the PNCF.

18.2.4.4. A PNCF shall be valid for a period of three (3) years and subject to renewal every three years on such terms and conditions as may be specified by the Authority from time to time.

18.2.4.5. A PNCF not utilized at the expiration of its validity period shall not be renewed by the Authority notwithstanding, the holder of the PNCF may apply for a fresh issuance.

18.2.4.6. The holder of a PNCF shall continue to demonstrate to the Authority its ability to meet the conditions set forth in the PNCF. In addition, the holder must have adequate resources for the maintenance and safe operation of the aircraft.

18.2.4.7. Each holder of a PNCF shall file with the Authority, a true copy of every contract or agreement affecting air transportation or any modification or cancellation thereof, between the holder and any other person including air carriers.

18.2.4.8. The Authority shall charge such fees as it may determine for processing the grant and renewal of PNCF.

18.2.4.9. The holder of PNCF shall pay such annual fee as may be determined by the Authority from time to time.

18.2.4.10. The Authority may vary, suspend or revoke a PNCF if the holder of the PNCF contravenes any of the provisions of the Civil Aviation Act, these regulations, rules and order made thereunder and any such condition subject to which the PNCF was granted.

18.2.4.11. The holder of PNCF shall be required to pay for variation of its permit, such fee as may be determined by the Authority from time to time.

18.2.4.12. If the Authority decides to suspend or revoke any PNCF, the Authority shall :

(*a*) Give a written notice to the holder of the PNCF specifying the violation(s) ;

(*b*) Specify in the written notice the right of the holder of the PNCF to make; representations in writing regarding the alleged violation(s) within thirty (30) days of the receipt of the written notice from the Authority ;

(*c*) Upon receipt of the representations from the holder of the PNCF, the Authority shall make an evaluation and inform the holder of the PNCF of its determination ;

(*d*) Notwithstanding the above, the Authority may by written notice, convey to the holder of the PNCF its decision to suspend the PNCF if it is in the interest of safety.

18.2.4.13. The Authority shall publish, for the information of the general public, its decision regarding an application for suspension or revocation of a PNCF.

18.2.4.14. A PNCF shall not be granted or renewed without a security clearance issued by the Government of the Federal Republic of Nigeria.

Air Travel Organiser's Licence (ATOL).

18.2.5. This section shall apply to tour organizers who are engaged in holiday travels, tour packages, special events, and religious pilgrimages.

18.2.5.1. No person shall organize tour operations for the purpose of holiday travels, tour packages, special events, religious pilgrimages unless in accordance with the provisions of an Air Travel Organiser's Licence (ATOL) or other authorization issued by the Authority.

18.2.5.2. Application for the grant or renewal of an ATOL shall be made in writing to the Authority and shall meet the requirements as specified in IS:18.2.5(A) and IS:18.2.5(B) or such other information as may be published by the Authority from time to time.

18.2.5.3. The Authority if satisfied that the applicant has complied with the requirements for the grant or renewal of the ATOL, shall grant or renew the ATOL.

18.2.5.4. An ATOL shall be valid for a period of two (2) years and subject to renewal every two years and on such terms and conditions as may be specified by the authority from time to time.

18.2.5.5. An ATOL not utilized at the expiration of its validity period shall not be renewed by the Authority, notwithstanding the holder of the ATOL may apply for a fresh issuance.

18.2.5.6. The holder of an ATOL shall continue to demonstrate to the Authority its ability to meet the conditions set forth in the ATOL.

18.2.5.7. The Authority shall charge such fees as it may determine for processing the grant and renewal of an ATOL.

18.2.5.8. The Authority may suspend or revoke an ATOL if the holder of the ATOL contravenes any of the provisions of the Civil Aviation Act, these regulations, rules and order made thereunder and any such condition subject to which the ATOL was granted.

18.2.5.9. If the Authority decides to suspend or revoke any ATOL, the Authority shall :

(*a*) Give a written notice to the holder of the ATOL specifying the violation(s) ;

(*b*) Specify in the written notice the right of the holder of the ATOL to make representations in writing regarding the alleged violation(s) within thirty (30) days of the receipt of the written notice from the Authority ;

(*c*) Upon receipt of the representations from the holder of the ATOL, the Authority shall make an evaluation and inform the holder of the ATOL of its decision ; and

(*d*) Notwithstanding the above, the Authority may by written notice, convey to the holder of the ATOL its decision to suspend the ATOL if it is in the interest of safety.

18.2.5.10. The Authority shall publish, for the information of the general public, its decision regarding an application for suspension or revocation of an ATOL.

Permit for Aerial Aviation Services (PAAS).

18.2.6. This section shall apply to the provision of aerial work operation, flying club, flying school and such other services as may be designated by the Authority from time to time.

18.2.6.1. No person shall provide aviation services such as aerial work, flying club, flying school and such other services as may be designated by the Authority from time to time, unless he is a holder of a Permit for Aerial Aviation Services (PAAS) or other authorizations issued by the Authority.

18.2.6.2. Application for the grant or renewal of a PAAS shall be made in writing to the Authority and shall meet the requirements as specified in IS:18.2.6 (A) and IS:18.2.6 (B) or such other information as may be published by the Authority from time to time.

18.2.6.3. The Authority if satisfied that the applicant has complied with the requirements for the grant or renewal of the PAAS shall grant or renew the PAAS.

18.2.6.4. A PAAS shall be valid for a period of three (3) years and subject to renewal every three years and on such terms and conditions as may be specified by the Authority from time to time.

18.2.6.5. A PAAS not utilized at the expiration of its validity period shall not be renewed by the Authority notwithstanding the holder of the PAAS may apply for a fresh issuance.

18.2.6.6. The holder of a PAAS shall continue to demonstrate to the Authority its ability to meet the conditions set forth in the PAAS.

18.2.6.7. If at the expiration of a PAAS, an application for renewal is pending with the Authority, the expiring PAAS may continue in force under such terms and conditions as prescribed by the Authority. This provision shall only apply if all the required documents for renewal of the PAAS have been submitted to the Authority and the delay is occasioned by a third party.

18.2.6.8. Each holder of a PAAS shall submit to the Authority annually or, at such times as the Authority may deem fit, a list showing the names of its shareholders or any person(s) holding more than five percent (5%) shareholding in the company together with the names of any person on whose behalf such shares are held.

18.2.6.9. Each holder of a PAAS shall file with the Authority, a true copy of every contract or agreement affecting air transportation or any modification or cancellation thereof, between the holder of PAAS and any air carrier or other bodies.

18.2.6.10. The Authority may suspend or revoke a PAAS if the holder of the PAAS contravenes any of the provisions of the Civil Aviation Act, these regulations, rules and orders made thereunder and any such condition subject to which the PAAS was granted.

18.2.6.11. If the Authority decides to suspend or revoke any PAAS, the Authority shall :

(*a*) Give a written notice to the holder of the PAAS specifying the violation(s) ;

(*b*) Specify in the written notice the right of the holder of the PAAS to make representations in writing regarding the alleged violation(s) within thirty (30) days of the receipt of the written notice from the Authority ;

(*c*) Upon receipt of the representations from the holder of the PAAS, the Authority shall make an evaluation and inform the holder of the PAAS of its determination ; and

(*d*) Notwithstanding the above, the Authority may by written notice, convey to the holder of the PAAS its decision to suspend the PAAS if it is in the interest of safety.

18.2.6.12. The Authority shall publish for the information of the general public, its decision regarding an application for suspension or revocation of a PAAS.

18.2.6.13. An applicant for a PAAS shall not be incorporated under Part C of the Companies and Allied Matters Act and any amendment thereof.

18.2.6.14. A PAAS shall not be granted or renewed without a security clearance issued by the Government of the Federal Republic of Nigeria.

18.3. DOMESTIC OPERATIONS

18.3.1. General.

18.3.1.1. This section shall apply to domestic airline operations in Nigeria. General.

18.3.1.2. Subject to these regulations, domestic airlines may determine the route(s) to operate, the frequency or frequencies of operations and fares to be charged.

18.3.1.3. All domestic airlines operating in Nigeria shall notify the Authority of the route(s) to operate, the frequency or frequencies of operations and fares charged prior to the introduction of these routes, frequencies and fares.

18.3.2. Scheduled Domestic Operations

18.3.2.1. Prior to commencement of operation, an ATL holder shall : Scheduled Domestic Operations.

(*i*) obtain Air Operator Certificate (AOC) from the Authority ;

(*ii*) have at least three (3) airworthy aircraft capable of servicing the approved schedule in its fleet ;

(*iii*) provide adequate insurance cover for passengers, cargo and third party.

18.3.2.2. An ATL holder who is already in operation shall at all times have at least two (2) airworthy aircraft capable of servicing the approved schedule in its fleet.

18.3.2.3. All airlines engaged in domestic operations that have in place arrangements for tickets interlining shall submit a copy of the agreement to the Authority.

18.3.2.4. All Airlines engaged in domestic operations shall operate in accordance with the conditions specified in their Licences.

18.3.3. Non-Scheduled Domestic Operations (Charter).

Non-Scheduled Domestic Operations (Charter).

18.3.3.1. A Holder of Airline Operating Permit (AOP) or Air Transport Licence (ATL) prior to commencement of non-scheduled operation shall :

(*i*) obtain Air Operator Certificate (AOC) from the Authority ; and

(*ii*) provide adequate insurance cover for passengers, cargo and third party.

18.3.3.2. All domestic Airlines engaged in non-scheduled operations shall not sell tickets or carry out any form of scheduled operations.

18.3.3.3. All domestic Airlines engaged in non-scheduled operations shall submit their client invoice and passenger manifest to the Authority for every flight.

18.3.3.4. All domestic Airlines engaged in non-scheduled operations shall operate in accordance with the conditions specified in their Permits.

18.3.4. Non-Commercial Operations (Private).

Non-Commercial Operations (Private).

18.3.4.1. Holders of Permit for Non-Commercial Flights (PNCF) shall :

(*i*) prior to the commencement of operations obtain Safety Certificates (including Maintenance Clearance Certificate (MCC) and Flight Operations Clearance Certificate (FOCC) for foreign registered aircraft) from the Authority ;

(*ii*) submit to the Authority details of their flight operations including names of passengers carried, route(s) operated and times of operations ;

(*iii*) not engage in any form of carriage of passengers, cargo or mail for hire and reward ; and

(*iv*) operate in accordance with the conditions specified in their Permits.

18.3.5. Aerial Aviation Services

18.3.5.1 Holders of Permit for Aerial Aviation Services (PAAS) shall : Aerial Aviation Services.

(*i*) obtain Safety Certificates from the Authority before commencement of operations ;

(*ii*) not engage in any form of carriage of passengers, cargo or mail for hire and reward;

(*iii*) not engage in any form of operation different from those specified in their Permits ; and

(*iv*) operate in accordance with the conditions contained in their Permits.

18.3.6. Holders of Air Travel Organizer's Licence (ATOL) shall : Organized package tours.

(*i*) not engage in aircraft operations ;

(*ii*) have current and adequate Bank/Insurance Bonds to cover their operations ;

(*iii*) ensure that their passengers are catered for and are treated in accordance with the contract of carriage and as specified in these Regulations ; and

(*iv*) operate in accordance with the conditions specified in their Licences.

18.3.7. Self-Handling Operations.

18.3.7.1. Where a domestic airline decides to handle itself, it shall obtain approval from NCAA after duly fulfilling the statutory requirements as specified by Part 18.9 of this Regulations. Self-Handling Operations.

18.3.8. All domestic airlines shall join and trade on the IATA Billing and Settlement Plan (BSP). Billing and Settlement Plan (BSP).

18.4. REGIONAL AND INTERNATIONAL OPERATIONS BY NIGERIAN AIRLINES

18.4.1. Scheduled Operations by Nigerian Airlines. Scheduled Operations by Nigerian Airlines.

18.4.1.1. The Authority shall issue an Air Carrier's Permit (ACP) to designated Nigerian airlines on international routes, subject to the airline fulfilling the requirements specified in IS 18.4.1.1 to these regulations and as may be published by the Authority from time to time.

18.4.1.2. All Nigerian airlines designated on regional and international routes in addition to obtaining safety certificates shall :

(*i*) Join IATA and the IATA Clearing House ;

(*ii*) have adequate financial capability for such operations.

18.4.1.3. All Nigerian airlines shall endeavour to have foreign technical partners.

18.4.2. Non-Scheduled Passenger (Charter) Operations—Commercial

Non-Scheduled Operations by Nigerian Airlines.

18.4.2.1. Holders of Air Operator Certificates (AOC) are not required to obtain flight clearances from the Authority prior to undertaking non-scheduled international operations, but shall be required to depart and enter the country through designated customs airports.

18.4.2.2. Non- Scheduled Cargo (Charter) Operations.

Holders of Airline Operating Permit (AOP) engaged in cargo operations shall :

(*i*) obtain Air Operator Certificates (AOC) from the Authority prior to commencement of operation ;

(*ii*) engage in cargo operations worldwide ;

(*iii*) not pay royalty on cargo carried ;

(*iv*) put in place adequate insurance cover for its cargo operations ;

(*v*) submit to the Authority their air waybills and client invoices ; and

(*vi*) enter and depart the country through designated customs airports.

18.4.2.3. Private Operations.

18.4.2.3.1. No person shall operate a private aircraft into and out of Nigeria without a flight clearance issued by the Authority. Such operations shall be undertaken only at designated Customs' airports.

18.4.2.4. Obtaining Information on Licences and Permits

18.4.2.4.1. Persons who intend to obtain information on Licences, Permits and Certificates issued by the Authority shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

18.5. Foreign Airline Operations Into and Out of Nigeria

18.5.1. Scheduled Operations by Foreign Airlines.

Scheduled Operations by Foreign Airlines.

18.5.1.1. Operations by Designated Foreign Airlines.

18.5.1.2. No Foreign Airlines shall engage in scheduled operations into and out of Nigeria, without a Foreign Carrier Operating Permit (FCOP) issued by the Authority.

18.5.1.3. Foreign airlines shall fulfill the requirements specified in IS:18.5.1.1.3 (A) and IS:18.5.1.1.3 (B) to these regulations as may be published by the Authority from time to time.

18.5.1.4. The Authority shall carry out safety assessment audit of the airline's base prior to the issuance of FCOP and commencement of operations.

18.5.1.5. Where the holder of a FCOP violates any provision of the Act, Regulations, Rules and Orders made thereunder, the Authority may suspend or revoke the FCOP.

18.5.1.6. Foreign airlines operating into and out of Nigeria for the purpose of scheduled international air services shall not have sales offices or outlets in cities other than the point(s) of entry specified in the subsisting bilateral air services agreement under which the foreign carrier is designated, and this shall be limited to the airports.

18.5.1.7. Foreign airlines operating into and out of Nigeria for the purpose of scheduled international air services shall not distribute tickets through banks and other financial institutions.

18.5.1.8. No Foreign airlines shall engage in self handling, but shall use the services of duly registered Nigerian handling companies.

18.5.2. Non-Scheduled Passenger (Charter) Operations by Foreign Airlines.

Non-Scheduled Passenger (Charter) Operations by Foreign Airlines.

18.5.2.1. No foreign airline shall conduct non-scheduled (charter) operations into and out of Nigeria without a flight clearance issued by the Authority.

18.5.2.2. No foreign airline shall engage in non-scheduled (charter) passenger operations into and out of Nigeria except in conjunction with a Nigerian ATOL holder.

18.5.2.3. A foreign airline engaged in non scheduled cargo operations into and out of Nigeria shall obtain approval from the Authority and also pay royalty to the Authority.

Monitoring of Foreign Operations.

18.6.1. The Authority will monitor the operations of all foreign airlines operating into and out of Nigeria to ensure that their operations are in accordance with the provisions of the subsisting BASAs, MASAs, Commercial Agreements and approvals guiding their operations.

18.6.2. The Authority will ensure that the frequencies being operated by foreign airlines are in accordance with the Seasonal Schedules approved by the Minister.

Commercial Agreements.

18.6.3. This sub section shall apply to the collection of flight data, billing and maintenance of account or accounts for the payment of royalties accruing to the country from commercial agreements with foreign airlines.

18.6.4. All foreign airlines having commercial agreements with Nigeria shall pay all royalties accruing to the country into a designated account(s) with the Central Bank of Nigeria (CBN).

18.6.5. All foreign airlines operating under commercial agreements shall forward to the Authority, passenger and cargo manifests, load sheets, air waybills and any other information that will be necessary for accurate billing, not later than twenty-four (24) hours after each flight.

18.6.6. A Reconciliation Committee shall be instituted for the purpose of resolution of disputes and discrepancies arising from bills forwarded to the foreign airlines by the Authority. The Reconciliation Committee shall comprise the Ministry, the Authority and the concerned airline.

18.6.7. Non-compliance with the terms of payment in the commercial agreement by any airline will result in the suspension or withdrawal of such services in addition to up to nine *percent* (9%) compound interest rate on the unsettled amount to be reflected in subsequent commercial agreements.

18.6.6.1. Multilateral Agreements.

The Authority will continue to promote the interests of Nigeria in the monitoring and implementation of the Yamoussoukro Decision, The Banjul Accord Group (BAG) Agreements and other Multilateral Agreements and Protocols to which Nigeria is signatory.

18.6.6.2. The Authority will continue to support and facilitate the implementation of the resolution of the Banjul Accord Group Council of Ministers to turn airline operations of the BAG States into domestic operations.

18.6.7.1. Open Skies Agreements.

The Authority shall continue to promote the interest of Nigeria, Nigerian airlines as well as the sustainable development of the Nigerian aviation industry, in fulfilling the country's obligation in any open skies agreement to which Nigeria is a signatory.

Airport and Air Navigation Services.

18.7.1. This section shall apply to the economic regulation of airports, air navigation services, and other related services.

18.7.2. Entry into the Airport Business.

Any person, state or local government intending to provide airport services shall show evidence of adequate financial capability to provide the necessary infrastructure in accordance with the guidelines and requirements set by the Authority.

Any person intending to establish aerodrome or take over an existing aerodrome shall obtain Security Clearance from the relevant agency in Nigeria.

18.7.3. Regulation of Charges, Fees and Tariffs.

All airport operators, air navigation service provider(s), and other service providers shall obtain the approval of the Authority before revising and imposing new charges, fees and tariffs for their services.

18.7.4. All airports and air navigation service providers shall provide financial or other data as may be required by the Authority to determine the basis for charges, fees and tariffs.

18.7.5. All airports and air navigation service providers shall adhere to the principles and procedures of consultation with users, cost-relatedness, non-discrimination and transparency in the application of charges, fees and tariffs.

18.7.6. All airports and air navigation service providers shall adhere to the policies, principles and guidelines contained in ICAO's documents, Doc.9082 (ICAO's Policies on Charges for Airports and Air Navigation Services), Doc.9562 (Airport Economic Manual) and Doc.9161 (Manual on Air Navigation Services Economics) or any amendment thereto.

18.7.7. Any person(s) who violates the provision of regulations 18.7.3.1 shall be liable to the penalty set forth in the sanctions regime of these regulations.

18.7.8. Service Level Agreements (SLAs).

All airports and air navigation service providers shall develop internal mechanisms for performance monitoring.

18.7.9. All airports and air navigation service providers shall enter into service level agreements (SLAs) with the users of their services.

18.7.10. Financial Returns and Other Obligations.

All airports and air navigation service providers shall submit to the Authority a 5-year business plan.

18.7.11. All airports and air navigation service providers shall submit their financial returns yearly, or at such periodic intervals in formats as may be prescribed by the Authority.

18.7.12. These financial returns shall include, but not be limited to income and expenditure statement, profit and loss statement, cash flow statement, insurance policy and evidence of payment of premiums, and other returns that may be required by the Authority.

18.8. FACILITATION OF AIR TRANSPORT.

Facilitation of Air Transport.

18.8.1. This subpart shall apply to rules governing the administration, efficient processing and expeditious clearance of passengers, crew, aircraft, baggage, cargo and mail at the airports.

18.8.2. The provisions of this subpart incorporate relevant guidelines and Standards and Recommended Practices (SARPs) contained in Annex 9 to the Convention on International Civil Aviation, and international best practices.

18.8.3. The provisions of this regulation shall apply to all categories of aircraft operations in Nigeria.

18.8.4. The Authority shall collaborate with all relevant facilitation and security agencies at the airports to ensure that the time required for the processing of passengers, crew, aircraft, baggage, cargo and mail is kept to the minimum without compromising security.

18.8.5**.** The Authority shall collaborate with all relevant Government agencies at the airports to ensure that minimum inconvenience is caused by the application of administrative and control requirements.

18.8.6. The Authority shall foster and promote the exchange of information amongst operators, airports and relevant facilitation and security agencies operating at the airports.

18.8.7. Relevant security agencies (customs narcotic control, State security etc) in Nigeria shall use risk management (including profiling) in the release and clearance of goods at the nation's airports.

18.8.8. All airport operators shall put in place efficient and effective information technology facilities at the airports.

Approval for entry and departure of aircraft.

18.8.9. Approval for entry and departure of aircraft.

18.8.9.1. This subpart shall apply to the approval for entry and departure of aircraft for non-schedule operations.

18.8.9.2. The Authority shall collaborate with all facilitation and security agencies at the airports to put in place appropriate measures for the efficient approval of aircraft arriving into and departing from all international airports in Nigeria without compromising security.

18.8.9.3. No airport operator shall prevent any aircraft from landing at any international airport for public health reason(s) unless such action is taken in accordance with the International Health Regulations (IHR) 2005 of World Health Organization (WHO).

18.8.9.4. The Authority shall request for supporting documents in respect of application for flight approval as specified by the Authority from time to time.

18.8.9.5. Visas are not required and fees shall not be charged for documentation for any aircraft entering or departing the country except the fees specified by the National laws.

18.8.9.6. Documents for entry and departure of aircraft shall be made in English.

18.8.9.7. Applications for grant of flight approval shall be made in paper or electronic form in the format prescribed by the Authority from time to time.

18.8.9.8. Airlines forwarding their Passenger Manifests to security agencies or other facilitation agencies shall ensure that such manifests are as presented in the format prescribed by the Authority from time to time.

18.8.9.10. Airlines forwarding their Cargo Manifests and Air Waybills to security agencies or other facilitation agencies shall ensure that such manifests and Air Waybills are as prescribed by the Authority.

18.8.9.11. The Authority will notify all security agencies at the airports of all requests for flight approval for non-scheduled operations received by the Authority prior to arrival of aircraft.

18.8.9.12. Requests for flight approval shall not be made through diplomatic channels except the flight is diplomatic in nature.

18.8.9.13. The Authority will establish procedures for processing flight approval and shall specify date of arrival and date of departure of flight, and points of entry and departure.

18.8.9.14. All requests for flight approval shall contain details as specified by the Authority from time to time.

18.8.9.15. The Authority will collaborate with security agencies to ensure that departure/arrival formalities for aircraft processing are completed within 60 minutes.

18.8.10. Clearance for entry and departure of persons.

Clearance for entry and departure of persons.

18.8.10.1. This subpart shall apply to the expeditious clearance of persons entering into and departing from all airports in Nigeria.

18.8.10.2. The Authority will collaborate with all facilitation and security agencies at the airports to put in place appropriate measures for the efficient clearance of passengers and crew arriving into and departing from all international airports in Nigeria without compromising security.

18.8.10.3. No document other than those specified by the Nigerian Immigration Service shall be required for the entry into and departure from all international airports in Nigeria.

18.8.10.4. Nigerian passengers travelling out of or into the country shall continue to carry machine readable passports.

18.8.10.5. All airlines and aircraft operators shall ensure that passengers are in possession of documents as specified by Nigeria Immigration Service before embarkation.

18.8.10.6. The Authority will continue to collaborate with all facilitation and security agencies at the airport to ensure that passengers are processed for departure within 60 minutes and arrival within 45 minutes.

18.8.10.7. All airport operators shall collaborate with relevant facilitation and security agencies to adopt dual passenger flow channel system based on risk management to process inbound passengers and their baggage.

18.8.11. Clearance for Entry and Departure of Cargo

18.8.11.1. This subpart shall apply to the expeditious clearance of cargo and other articles entering into and departing from all airports in Nigeria.

18.8.11.2. The Authority will collaborate with all facilitation and security agencies at the airports to put in place appropriate measures for the efficient clearance of cargo and other articles arriving into and departing from all international airports in Nigeria without compromising security.

18.8.11.3. All airport operators shall put in place modern screening techniques to facilitate the physical examination for goods to be imported or exported.

18.8.11.4. The production and presentation of cargo manifests and airwaybills in manual or electronic form shall be the responsibility of the aircraft operator or its authorized agent.

18.8.11.5. All cargo owners shall provide other required documents for clearance of goods as required by the Nigeria Customs Service.

Facilities and services for traffic at international airports.

18.8.12. Facilities and services for traffic at international airports.

18.8.12.1. All airport operators shall ensure the provision of facilities and services at all international airports for efficient and effective processing of passengers, crew, baggage, cargo, mail and aircraft.

18.8.12.2. All airport operators shall provide adequate facilities for the efficient embarkation and disembarkation of passengers, cargo and mail at all airports in Nigeria.

18.8.12.3. All airport operators in Nigeria shall provide signage in accordance with guidance contained in the ICAO Doc 9636 (International Signs to Provide Guidance to Persons at Airports and Marine Terminals).

18.8.12.4. All airport operators shall maintain flight information systems at the airports in accordance with Doc 9249 (Dynamic Flight-Related Public Information Displays).

18.8.12.5. All airport operators shall provide adequate flow channels for expeditious clearance of inbound and outbound passengers, crew and baggage.

18.8.12.6. All airport operators in Nigeria shall ensure the availability of assistance to passengers in the carriage of their baggage from baggage claim areas to surface transportation areas.

18.8.12.7. All airport operators shall provide facilities where unclaimed, unidentified and mishandled baggage is kept securely until cleared, forwarded, claimed or disposed of in accordance with the extant regulations.

18.8.12.8. All airport operators shall provide facilities for the operations of public health including Human, animal and plant quarantine at all international airports in Nigeria.

18.8.12.9. All aircraft operators operating scheduled services in to and out of Nigeria shall make available their approved schedules to airport operators to enable them make available adequate facilities for efficient operations.

18.8.12.10. All airport operators may not directly collect passenger service charge or any other charge or tax from passengers.

18.8.12.11. Airport and airlines Operators shall put in place automated facilities for passenger and cargo processing as well as the collection of checked baggage.

18.8.12.12. Airport operators shall provide car parking facilities for long and short term usage by passengers, visitors, crew and staff at international airports.

18.8.13. Persons with Reduced Mobility

18.8.13.1. Every airport operator, airline and ground handling company shall provide facilities at the airports to enhance the movement of Persons with Reduced Mobility (PRM) and also ensure that no passenger is discriminated against on the grounds of his/her disability or reduced mobility.

18.8.14. Nigeria National Facilitation Programme

Nigeria National Facilitation Programme.

18.8.14.1. The Authority shall initiate the process for the establishment of a National Facilitation Programme to provide for and facilitate the border-crossing formalities that must be accomplished with respect to aircraft engaged in international operations and their passengers, crew and cargo. The composition, terms of reference and mode of operations of the Nigeria National Facilitation Programme shall be as specified in the Nigeria National Facilitation Programme Manual.

18.8.14.2. There shall be established a Nigeria National Facilitation Committee which shall be headed by the Director General.

18.8.14.3. The composition, terms of reference and mode of operations of the Nigeria National Facilitation Committee shall be as specified in IS:18.8.14 of these Regulations.

18.8.15. Airport Facilitation Programme

Airport Facilitation Programme.

18.8.15.1. Every airport operator shall establish an Airport Facilitation Committee at its airport.

18.8.15.2. The composition, terms of reference and mode of operations of the Airport Facilitation Committee shall be as specified in IS:18.8.15.2.(A) and (B) of these Regulations

18.8.16. Airport Slot Allocation Committee

Airport Slot Allocation Committee.

18.8.16.1. Every airport operator shall establish where necessary, a Slot Allocation Committee, which shall ensure the continued access of airlines to the airport on a fair, transparent and non-discriminatory basis.

18.8.16.2. The composition, terms of reference and mode of operation of the Slot Allocation Committee shall be as specified in IS18.8.6.2 of these Regulations.

Airport Health Regulations.

18.8.17. Airport Health Regulations.

18.8.17.1. No airport operator shall prevent any aircraft from landing at any international airport for public health reason(s) unless such action is taken in accordance with the International Health Regulations (2005) of World Health Organization (WHO).

18.8.17.2. In cases where, in exceptional circumstances, air transport service suspensions on public health grounds are under consideration, the World Health Organization and the Federal Ministry of Health (FMOH) shall first be consulted by the Authority before taking any decision as to the suspension of air transport services.

18.8.17.3. If, in response to a specific public health risk or a public health emergency of international concern, the Authority is considering introduction of health measures in addition to those recommended by WHO, it shall do so in accordance with the International Health Regulations (2005), including but not limited to Article 43, which states, in part, that when determining whether to implement the additional health measures, relevant Parties shall base their determinations upon :

(*a*) scientific principles ;

(*b*) available scientific evidence of a risk to human health, or where such evidence is insufficient, the available information including from WHO and other relevant intergovernmental organizations and international bodies ; and

(*c*) any available specific guidance or advice from WHO.

18.8.17.4. A General Declaration when required, the information requirements shall be limited to the elements indicated in I.S 18.8.1. The information shall be accepted in either electronic or paper form.

18.8.17.5. The Authority shall not normally require the presentation of a Passenger Manifest. On those occasions when a Passenger Manifest is required, the information requirements shall be limited to the elements indicated in I.S. 18.8.2. The information shall be accepted in either electronic or paper form.

Disinsection of Aircraft.

18.8.18. Disinsection of Aircraft.

18.8.18.1. The Authority shall limit any routine requirement for the disinsection of aircraft cabins and flight decks with an aerosol while passengers and crews are on board, to same-aircraft operations originating in, or operating via, territories that they consider to pose a threat to their public health, agriculture or environment.

18.8.18.2. The Authority shall periodically review the requirements for the Disinsection of aircraft and shall modify them, as appropriate, in the light of all available evidence relating to the transmission of insects to Nigeria via aircraft.

18.8.18.3. The Authority shall authorize or accept only those methods, whether chemical or non-chemical, and/or insecticides, which are recommended by the World Health Organization and are considered efficacious.

18.8.18.4. The Authority shall ensure that procedures for disinsection are not injurious to the health of passengers and crew and cause the minimum of discomfort to them.

18.8.18.5. The Authority shall, upon request, provide to aircraft operators appropriate information, in plain language, for air crew and passengers, explaining the pertinent national regulation, the reasons for the requirement, and the safety of properly performed aircraft disinsection.

18.8.18.6. When disinsection has been performed in accordance with procedures recommended by the World Health Organization, the Authority shall accept a pertinent certification on the General Declaration as provided for in I.S. 18.8.1 or, in the case of residual disinsection, the Certificate of Residual Disinsection set forth in I.S. 18.8.3.

18.8.18.7. When disinsection has been properly performed pursuant to 18.8.20.3 and a certificate as indicated in 18.8.20.6 is presented or made available to the public authorities in the country of arrival, the authorities shall normally accept that certificate and permit passengers and crew to disembark immediately from the aircraft.

18.8.18.8. The Authority shall ensure that any insecticide or any other substance used for disinsection does not have a eleterious effect on the structure of the aircraft or its operating equipment. Flammable chemical compounds or solutions likely to damage aircraft structure, such as by corrosion, shall not be employed.

18.8.19. DISINFECTION OF AIRCRAFT

18.8.19.1. The Authority shall determine the conditions under which aircraft are disinfected. When aircraft disinfection is required, the following provisions shall apply : Disinfection of Aircraft.

(*a*) the application shall be limited solely to the container or to the compartment of the aircraft in which the traffic was carried ;

(*b*) the disinfection shall be undertaken by procedures that are in accordance with the aircraft manufacturer and any advice from WHO ;

(*c*) the contaminated areas shall be disinfected with compounds possessing suitable germicidal properties appropriate to the suspected infectious agent ;

(*d*) the disinfection shall be carried out expeditiously by cleaners wearing suitable personal protective equipment ; and

(*e*) flammable chemical compounds, solutions or their residues likely to damage aircraft structure, or its systems, such as by corrosion, or chemicals likely to damage the health of passengers or crew, shall not be employed.

NOTE.— When aircraft disinfection is required for animal health reasons, only those methods and disinfectants recommended by the International Office of Epizootics should be used.

18.8.19.2. The Authority shall ensure that where there is contamination of surfaces or equipment of the aircraft by any bodily fluids including excreta, the contaminated areas and used equipment or tools shall be disinfected.

International Certificates of Vaccination or Prophylaxis.

18.8.20. International Certificates of Vaccination or Prophylaxis.

18.8.20.1. In cases where proof of vaccination or prophylaxis is required by national authorities under the International Health Regulations (2005), the Authority shall accept the International Certificate of Vaccination or Prophylaxis prescribed by the World Health Organization in the IHR (2005).

Facilities required for implementation of Public Health, Emergency Medical Relief, and Animal and Plant Quarantine Measures.

18.8.21. Facilities required for implementation of Public Health, Emergency Medical Relief, and Animal and Plant Quarantine Measures.

18.8.21.1. The Authority, in cooperation with airport operators, shall ensure the maintenance of public health, including human, animal and plant quarantine at international airports.

18.8.21.2. The Authority shall ensure that there are, at or near all their major international airports, facilities and services for vaccination or revaccination, and for the delivery of the corresponding certificates.

18.8.21.3. International airports should have available access to appropriate facilities for administration of public health and animal and plant quarantine measures applicable to aircraft, crew, passengers, baggage, cargo, mail and stores.

18.8.21.4. The Airport Operator shall ensure that passengers and crew in transit can remain in premises free from any danger of infection and insect vectors of diseases and, when necessary, facilities should be provided for the transfer of passengers and crew to another terminal or airport nearby without exposure to any health hazard. Similar arrangements and facilities shall also be made available in respect of animals.

18.8.21.5. The Authority shall ensure that handling and distribution procedures for consumable products (i.e. food, drink and water supplies) on board aircraft or in the airport are in compliance with the International Health Regulations (2005) and relevant guidelines of the World Health Organization, the Food and Agriculture Organization and national airport regulations.

18.8.21.6. The Authority in cooperation with airport and aircraft operators, shall ensure that a safe, sanitary and efficient system is instituted, at international airports, for the removal and disposal of all waste, waste water and other matters dangerous to the health of persons, animals or plants, in compliance with the International Health Regulations (2005) and relevant guidelines of the World Health Organization, the Food and Agriculture Organization and national airport regulations.

18.8.21.7. The Authority, in cooperation with airport operators, shall ensure that international airports maintain facilities and services for first-aid attendance on site, and that appropriate arrangements are available for expeditious referral of the occasional more serious case to prearranged competent medical attention.

NOTE.— The World Health Organization shall be consulted on all issues concerning passenger health.

Implementation of International Health Regulations and Related Provisions.

18.8.22. Implementation of International Health Regulations and Related Provisions.

18.8.22.1. The Authority shall comply with the pertinent provisions of the International Health Regulations (2005) of the World Health Organization.

18.8.22.2. The Authority shall take all possible measures to have vaccinators use the Model International Certificate of Vaccination or Prophylaxis, in accordance with Article 36 and Annex 6 of the International Health Regulations (2005), in order to assure uniform acceptance.

18.8.22.3. The Authority shall make arrangements to enable all aircraft operators and agencies concerned to make available to passengers, sufficiently in advance of departure, information concerning the vaccination requirements of the countries of destination, as well as the Model International Certificate of Vaccination or Prophylaxis conforming to Article 36 and Annex 6 of the International Health Regulations (2005).

18.8.22.4. The pilot-in-command of an aircraft shall ensure that a suspected communicable disease is reported promptly to air traffic control, in order to facilitate provision for the presence of any special medical personnel and equipment necessary for the management of public health risks on arrival.

NOTE 1.— A communicable disease could be suspected and require further evaluation if a person has a fever (temperature 38°C/100°F or greater) that is associated with certain signs or symptoms: e.g. appearing obviously unwell; persistent coughing; impaired breathing; persistent diarrhoea; persistent vomiting; skin rash; bruising or bleeding without previous injury; or, confusion of recent onset.

NOTE 2.— In the event of a case of suspected communicable disease on board an aircraft, the pilot-in-command may need to follow his operator's protocols and procedures, in addition to health-related legal requirements of the countries of departure and/or destination. The latter would normally be found in the Aeronautical Information Publications (AIP's.

NOTE 3.— Annex 6 — Operation of Aircraft describes the "on board" medical supplies that are required to be carried on aircraft. The Procedures for Air Navigation Services — Air Traffic Management (Doc 4444) (PANS-ATM) detail the procedures to be followed by the pilot-in-command in communication with air traffic control.

18.8.22.5. When a public health threat has been identified, and when the public health authorities require information concerning passengers' and/or crews' travel itineraries or contact information for the purposes of tracing persons who may have been exposed to a communicable disease, that Contracting State should accept the "Public Health Passenger Locator Card" see I.S. 18.8.4 as the sole document for this purpose.

NOTE.— The Federal Ministry of Health through the Port Health Authorities shall make available adequate stocks of the Passenger Locator Card, for use at international airports and for distribution to aircraft operators, for completion by passengers and crew.

18.8.23. Communicable Disease Outbreak National Aviation Plan.

Communicable Disease Outbreak National Aviation Plan.

18.8.23.1. The Authority shall establish a national aviation plan in preparation for an outbreak of a communicable disease posing a public health risk or public health emergency of international concern.

18.9. ALLIED AVIATION SERVICES

Registration of Allied Aviation Business.

18.9.1. This section shall apply to the registration of allied aviation businesses. No person shall undertake the following businesses without a certificate of registration or licence issued by the Authority in line with the requirements specified in IS18.9.1.2 :

(*i*) Ground Handling ;

(*ii*) Agent of Foreign Airlines ;

(*iii*) Travel Agency ;

(*iv*) Cargo Agency and Air Freight Forwarding ;

(*v*) In-flight Catering Services ;

(*vi*) Aviation Fuel Supply ;

(*vii*) Air Transport Training Institutions ;

(*viii*) Aircraft Sale or Leasing ; and

(*ix*) Other Aviation Related Services.

18.9.2. The Authority shall keep a register of all allied aviation businesses issued with certificate of registration or licence.

Register of Certificate of Registration or Licence.

18.9.3. Airport operators shall not discriminate against or decline access to any airline, allied aviation service provider in the provision of services or facilities at their airports.

Discrimination against or Decline of Access to Airlines.

18.9.4. Travel Agency Business in Nigeria.

Travel Agency Business in Nigeria.

18.9.4.1. All travel Agencies shall register with the Authority after fulfilling the necessary requirements specified in IS18.9.1.2 (*iii*) to these regulations.

18.9.4.2. All registered travel agencies shall join and trade on the IATA BSP platform.

18.9.5. Any person that intends to carry out business as General Sales Agent (GSA) in Nigeria shall :

General Sales Agent.

(*i*) be a citizen of Nigeria or a body corporate, registered in Nigeria and having its principal place of business within Nigeria, with majority shareholding held by Nigerians ; and

(*ii*) have adequate resources for the discharge of actual and potential obligations of travel agency.

18.9.6. All Air Transport Training Institutions offering air transport commercial courses shall register with the Authority as specified in IS:18.9.1.2 (*vii*).

Registration of Air Transport Training Institution.

18.9.7. Unrestricted Access For Monitoring Purpose.

Unrestricted Access For Monitoring Purpose.

18.9.8.1. An applicant for certificate of registration or licence for allied aviation service shall grant to any person authorized by the Authority free and unrestricted access at any time without prior notice to inspect the office premises or warehouse and any documents required for issuance of certificate of registration or licence.

18.10. AIRLINE FINANCIAL HEALTH

Airline Financial Health.

18.10.1. This section shall apply to the continuous monitoring of the operations of Nigerian licensed airlines for the purpose of ensuring their financial capability to continue to conduct and sustain flight operations.

18.10.2. All Nigerian licensed airlines shall ensure proper, transparent and prudent financial management in the conduct of their operations.

18.10.3. All Nigerian licensed airlines shall submit to the Authority on a monthly basis, all financial data and records on their operations in the form and manner as may be prescribed by the Authority.

18.10.4. The Authority shall evaluate the financial returns and make available a copy of the report of the financial health assessment to the Management of the airline which may make a representation to the Authority.

18.10.5. The Authority upon receipt of the airline's representation shall review same and communicate its decision to the airline.

18.11. AVIATION INSURANCE

Aviation Insurance.

18.11.1. This section prescribes the type of insurance cover to be maintained by all aviation service providers in Nigeria.

18.11.2. No person shall operate any aircraft in public air transport category without adequate and valid insurance.

18.11.3. Aerodrome, air navigation, meteorology services, ground handling and other allied aviation service providers shall not operate without maintaining adequate and valid insurance.

18.11.4. Any person having a duty to maintain adequate insurance shall submit to the Authority copies of valid insurance certificates, evidence of payment of premium and policy documents.

18.11.5. All airlines, aerodrome operators, air navigation, meteorology services, ground handling services and other allied service providers shall ensure payment of premium as and when due and submit evidence of payment to the Authority.

18.11.6. All airlines shall include in their tickets a statement to the effect that liability arising from death and bodily injury to passengers in the course of carriage by air within or from Nigeria shall be governed by the provisions of the Act and these regulations.

18.11.7. The minimum third party liability insurance limit for aircraft engaged in aircraft operations in Nigeria shall be in relation to the Maximum Take-Off Weight (MTOW) of an aircraft as indicated in the table below :

FIXED WING AIRCRAFT

Category	*A/C MTOW (kg)*	*Minimum Third Party Liability Limit (US$)*
1.	Up to 499	375,000
2.	500-999	750,000
3.	1,000-2699	1,500,000
4.	2700-5999	3,500,000
5.	6,000-11,999	9,000,000
6.	12,000-24999	40,000,000
7.	25,000-49,999	75,000,000
8.	50,000-199,999	150,000,000
9.	200,000-499,999	250,000,000
10.	500,000 plus	350,000,000

ROTARY WINGS AIRCRAFT

Category	*A/C MTOW (kg)*	*Minimum Third Party Liability Limit (US$)*
1.	Up to 499	750,000
2.	500-999	1,500,000
3.	1,000-2699	3,000,000
4.	2700-5999	7,000,000
5.	6,000-11,999	18,000,000
6.	12,000-24999	80,000,000
7.	25,000-49,999	150,000,000

18.11.8. The minimum insurance cover for aircraft engaged in the carriage of passengers, mail and cargo in Nigeria shall be in relation to the aircraft available capacity.

18.11.9. The limits of liability for death or bodily injury of passenger, loss or delay of baggage and cargo for domestic and international operations shall be as prescribed by the Act.

18.11.10. The minimum insurable cover for aerodromes, air navigation, meteorology services, ground handling and other allied aviation services shall from time to time be fixed by the Authority. The insurable sum shall cover the following areas :

(*i*) Airside and landside ;

(*ii*) Bodily injury ;

(*iii*) Property damage ;

(*iv*) Hijacks and Hostage-taking ; and

(*v*) War Risks.

18.11.11. Operators of the following aviation services shall maintain minimum insurance cover for their operations as prescribed by the Authority from time to time :

(*i*) Ground Handling

(*ii*) Aerodrome (International)

(*iii*) Aerodrome (Domestic)

(*iv*) Air Navigation Services

(*v*) Aeronautical Meteorology

(*vi*) Aviation Fuel Supplier

(*vii*) Airstrip

(*viii*) Heliport

Family Assistance Programme.

18.11.12. The Authority shall facilitate the establishment of a Family Assistance Programme (FAP) which shall provide succour to aircraft accident victims and their families in accordance with the ICAO Doc 9998 (*ICAO Policy on Assistance to Aircraft Accident Victims and their Families*).

18.12. CIVIL AVIATION FEES

Civil Aviation Fees.

18.12.1. This section shall apply to the collection and remittance of all sales charges and sundry charges as may be specified by the Authority.

18.12.2. There shall continue to be a 5% air ticket, contract, charter, and cargo sales charge paid to the Authority.

18.12.3. The Authority may review the 5% air ticket, contract, charter, and cargo sales charge from time to time in consultation with the stakeholders.

18.12.4. The 5% air ticket sales charge shall be based on the total cost of travel paid by the passenger to the airline. This shall be the cost of ticket inclusive of fuel surcharge or any other charge added to the total cost of travel by the airline exclusive of government Value Added Tax or any other tax that may be imposed by government from time to time.

18.12.5. All domestic and international airlines operating in Nigeria shall forward to the Authority through an electronic platform provided by the Authority, all relevant documents such as flown coupons, passenger or cargo manifests, air waybills, load sheets, clients' service invoices and other documents necessary for accurate billing within forty-eight (48) hours after each flight.

18.12.6. All Nigerian licensed airlines shall join the IATA/BSP for the purpose of remittance of 5 *percent* Sales Charges, and shall execute a contract with the Authority to that effect.

18.12.7. All foreign cargo operators shall submit cargo manifests and continue to pay royalty in a manner prescribed by the Authority before the flight is approved to land or take off in Nigeria.

18.12.8. All Nigerian charter operators shall submit clients' service invoices (CSIs) on hourly or fixed sum contract at commencement of operation for invoicing and payment of Charter Sales Charge (CSC) to the Authority .

18.12.9. All sales charges and royalties shall be paid in the currency in which they are being charged.

18.12.10. Any dispute arising from bills raised by the Authority shall be resolved through a Reconciliation Committee, comprising the Authority and the disputing airline.

18.13. AIR TRANSPORT STATISTICS

Air Transport Statistics.

18.13.1. This section shall apply to the collation, submission and analysis of statistical data on domestic and international airline operations.

18.13.2. All airlines, air navigation service providers, aerodrome operators and other service providers shall submit to the Authority statistical data of their operations in the form and manner as prescribed by the Authority in IS 18.13.2.

18.13.3. The Authority shall keep a record of all data submitted and shall analyze same for annual statistical publication and file with ICAO in accordance with Article 67 of the Chicago Convention.

18.14. FARES AND TARIFF

Filing of Fares and Tariffs.

18.14.1. Except as provided in an international agreement, convention or arrangement regarding civil aviation, before commencing the operation of a service, an air carrier or its agent shall :

(*i*) file with the Authority a tariff annually and/or any fare adjustment for that service showing all rates, fares and add-on charges, including the terms and conditions of free and reduced rate transportation for that service, as specified in IS.18.14.1.1. ;

(*ii*) denominate all rates, fares and charges shown in any tariff in the first instance, in local currency, notwithstanding whether such fares and charges are denominated in foreign currencies in the case of foreign carriers ; and

(*iii*) obtain approval from the Authority to introduce and or increase add-on charges or surcharges such as fuel, internet booking, insurance, security and similar surcharges, prior to implementation.

18.14.2. All tariffs required to be filed in pursuance of 18.14.1.1 shall be done at least seven (7) days before the rates come into effect, except in the case of matching an existent rate for which no more than prior notification is required.

18.14.3. All fares may be available for sale and carriage as long as they are not disallowed or suspended in accordance with section 18.14.2 of these regulations.

18.14.4. If an air carrier that offers a service fails to apply the fares, rates, charges or terms and conditions of carriage set out in the tariff that applies to that service, the Authority may direct it to :

(*i*) take the corrective measures it considers appropriate ; and

(*ii*) pay compensation for any expense incurred by a person adversely affected by its failure to apply the fares, rates, charges or terms and conditions set out in the tariff.

18.14.5. Tariffs in any medium may be filed with the Authority provided that, where a medium other than paper is to be used, the Authority and the filer have signed an agreement for the processing, storage, maintenance, security and custody of the data base.

18.14.6. The following shall apply to changes in tariff :

(*i*) Except where a toll is disallowed, no rate may be changed unless the tariff or amendment in which it is set out is filed within the appropriate time limit set out in section 18.14.2.2.

(*ii*) Every tariff or toll may bear an expiry date.

(*iii*) Any amendment to the expiry date of a tariff after the date of its publication shall be made in accordance with section 18.14.1.2.

Disallowance or Suspension of Fares.

18.14.6.1. Subject to the provisions of these regulations, the Director-General may decide, at any time :

(*i*) to disallow or suspend a basic fare which, taking into account the whole fare structure for the route in question and other relevant factors including the competitive market situation, is excessively high to the disadvantage of consumers in relation to the long term fully-allocated relevant costs of the air carrier, including a satisfactory return on capital ;

(*ii*) to stop, in a non-discriminatory way, further fare decreases in a market, whether on a route or a group of routes, when market forces have led to sustained downward development of air fares deviating significantly from ordinary seasonal pricing movements and resulting in widespread losses among all air carriers concerned for the air services concerned, taking into account the long term fully allocated relevant costs of the air carriers.

18.14.6.2. In the case of a foreign air carrier whose State has entered a bilateral or multilateral air services agreement with Nigeria that contain parallel notification or double disapproval obligations, the following shall apply :

(*i*) a decision taken pursuant to 18.14.2.1 shall be notified with reasons to the relevant authorities of the foreign state involved as well as to the affected air carriers.

(*ii*) if within fourteen days of the date of receiving notification, no relevant authority of any concerned foreign state has notified disagreement stating its reasons, the Director-General may advise the Minister to direct the air carrier concerned to withdraw the basic fare or to abstain from further fare increases or decreases, as appropriate.

(*iii*) in the case of disagreement, the Director-General may advise the Minister to consult the relevant authority of the foreign state involved to review the situation.

18.14.6.3. In all cases other than 18.14.2.2, the following shall apply :

(*i*) a decision taken pursuant to 18.14.2.1, shall be notified with reasons to the affected air carrier.

(*ii*) the affected air carrier under 18.14.2.3.

(*iii*) may within fourteen (14) days of receipt of the decision, make written representations identifying clearly a rational justification for its rate to the Authority with a request for a review of the decision.

(*v*) the Authority shall within fourteen (14) days of its receipt of the written representations convey its final decision to the affected air carrier.

18.14.6.4. Where any provision of a tariff is suspended or disallowed by the Authority or the Minister, the issuing air carrier or its agent shall immediately file with the Authority an appropriate tariff, to become effective not less than two (2) working days after the date of filing that restores the provision replaced by the suspended or disallowed provision.

18.14.6.5. Where any provision of a tariff is suspended or disallowed by directive of the competent authorities of a foreign state, or the suspension or disallowance has been rescinded or the cancellation of the suspended or disallowed provision has been directed by those authorities, the issuing air carrier or agent may comply with their decision in accordance with such regulations of the competent authorities as may be pertinent.

Approval of Charges.

18.14.7. In requesting for approval of any add-on charge or surcharge, an air carrier is required to provide a justifiable basis for the charge or surcharge with a consideration of all relevant factors including a near linear rationalization for the specific aggregated costs sought to be recovered and consumer interests.

18.14.7.1. When approving any application for an add-on charge or surcharge related to fuel, the Authority shall :

(*i*) take into account changes in the prices of aviation fuel, the relevant hedging policies of the air carrier, the justifications provided by the air carrier and other relevant factors ;

(*ii*) ensure that the revenue so generated would not exceed the additional fuel costs borne by the airline operators during the corresponding period ; and

(*iii*) approve on a short term basis, not exceeding a period of two (2) months in each instance.

18.14.8. Every air carrier shall :

Publication and Display of Tariffs.

(*i*) display in a prominent place at the business offices of the air carrier a sign indicating that the tariffs for the domestic service offered by the air carrier, including the terms and conditions of carriage, are available for public inspection at the business offices of the air carrier, and allow the public to make such inspections ;

(*ii*) publish the tariffs and the terms and conditions of carriage on any Internet site used by the air carrier for selling the service offered by the air carrier ;

(*iii*) in its tariffs, specifically identify (avoiding the use of codes) the basic fare, and all specific charges and surcharges between all points for which the air service is offered by the air carrier ; and

(*iv*) retain a record of its tariffs for a period of not less than six years after the tariffs have ceased to have effect.

18.14.8.1. A tariff referred to in 18.14.4.1 shall include such other information as the Authority may by order prescribe from time to time.

18.14.8.2. An air carrier shall not apply any fare, rate, charge or term or condition of carriage applicable to the service it offers unless the fare, rate, charge, term or condition is set out in a tariff that has been published or displayed under 18.14.4.1 and is in effect.

18.14.8.3. An air carrier shall provide a copy or excerpt of its tariffs to any person on request and on payment of a fee not exceeding the cost of making the copy or excerpt.

18.14.8.4. If, on complaint in writing to the Authority by any person, the Authority finds that, contrary to 18.14.4.1, an air carrier has applied a fare, rate, charge, surcharge or term or condition of carriage applicable to the service it offers that is not set out in its tariffs, the Authority may order the air carrier to :

(*i*) apply a fare, rate, charge, surcharge or term or condition of carriage that is set out in its tariffs ;

(*ii*) compensate any person adversely affected for any expenses they incurred as a result of the air carrier's failure to apply a fare, rate, charge, surcharge or term or condition of carriage that was set out in its tariffs ; and

(*iii*) take any other appropriate corrective measures.

Filing through an Agent.

18.14.9. Before an air carrier publishes tariffs through an agent, the carrier shall file with the Authority a letter authorizing the agent to act on its behalf.

18.14.9.1. Where an air carrier publishes tariffs through another air carrier or a company that is not an air carrier, the issuing carrier shall first file with the Authority a letter authorizing the other carrier or company to act on its behalf.

Unfair Methods of Competition and Anti-competitive Practices.

18.15. This Section shall apply to unfair methods of competition and Anti-Competitive practices.

18.15.1. Control of Anti-Competitive Practices.

It shall be unlawful to enter into any contract, arrangement, understanding or conspiracy between two or more parties in the civil aviation industry where such contract, arrangement, understanding, or conspiracy constitutes a restraint of competition.

18.15.2. For the purposes of this section, restraint of competition in relation to a contract, arrangement, understanding, conspiracy or combination means restraint in any market in which a party supplies or acquires or is likely to supply or acquire products or services and shall include acts which—

(*i*) directly or indirectly fix a charge, fee, rate, fare and tariff or any other trading condition ;

(*ii*) divide markets by allocating customers, passengers, suppliers, slots, territories or specific types of products or services ;

(*iii*) involve collusive action ;

(*iv*) limit or control development or investment in capacity, slots, and any other market or operational factor ;

(*v*) apply dissimilar conditions to equivalent transaction with other service providers thereby placing the other party at a competitive disadvantage ; and

(*vi*) make the conclusion of an arrangement, understanding or contract subject to acceptance by the other parties of supplementary obligation and which, by their nature or according to commercial usage, have no connection with the subject of the contract.

18.15.3. Any contract, arrangement, or understanding which is prohibited under section 18.15.1. of these regulations are prohibited and void.

18.15.4. The provisions of section 18.15.3. shall not apply to any agreement or category of agreements the entry into which is authorized by the Authority after being satisfied that it :

(*i*) contributes to the improvement of availability or distribution of products and services or the promotion of technical or economic progress, while allowing consumers a fair share of the resulting benefit ;

(*ii*) imposes on the airline, service providers or operators concerned only such restrictions as are indispensable to the attainment of objectives referred to in paragraph (*i*) ; or

(*iii*) does not afford such airline, service providers or operators the possibility of eliminating competition in respect of a substantial part of the products and services concerned.

18.15.5. An agreement to engage in a restrictive practice is presumed to exist between two or more parties where : Restrictive and Concerted Practices.

(*i*) any one of the parties owns a majority interest in the other, or they have at least one director or substantial shareholder in common ; and

(*ii*) any combination of the parties are engaged in that restrictive practice.

18.15.6. Notwithstanding 18.15.5, the practices identified in 18.5.7-18.5.8 shall be deemed to be restrictive practices which constitute unfair methods of competition, and anti-competitive in nature and are hereby prohibited.

18.15.7. Airlines shall not engage in the following restrictive practices :

(*i*) undue and discriminatory policies for commissions, offering sales commissions to the trading counterpart(s) [passengers or customers], or taking any other improper marketing actions, to sell its passenger tickets or tonnage ;

(*ii*) preventing or restraining sales agents from selling passenger tickets or tonnage of other airlines or service providers; for the purpose of selling its own passenger tickets or tonnage ;

(*iii*) restraining passengers or customers from selecting carriers freely with a view to excluding other airlines or service providers ;

(*iv*) imposing restrictions on the regular operations of other airlines, service providers, operator or sales agents by taking advantage of computer applied system or communication network that is under its control.

18.15.8. Airport or air navigation service providers shall not engage in the following restrictive practices :

(*i*) placing undue conditions in respect of sales, checking, aircraft loading or other matters, and imposing improper restrictions on takeoff or landing of aircraft of an airline, or refusing to contract with an airline to provide support services that are in its range of business ;

(*ii*) taking exclusive or discriminatory actions against an airline who has no agreement for ground handling with it ;

(*iii*) setting chargeable items and standards; without authorization from the Authority ;

(*iv*) taking advantage of its superior position, by violating the principle of equality, mutual benefit and reaching unanimity through consultation, imposing unfair provisions in the agreement for ground services or other service agency agreement concluded with its counterpart ;

(*v*) intentionally raising or reducing the bid price in collusion with the bidder in a public bidding for airport services or operation of commercial facilities.

18.15.9. Agents and tour operators shall not engage in the following restrictive practices :

(*i*) acting beyond the limits of agency authorized by the airline and infringing upon the lawful rights and interests of the airline or other sales agents or tour operators ;

(*ii*) soliciting passengers and cargo customers by bribery, offering sale commission to the counterpart outside the tickets or the accounts, or other improper marketing means ; and

(*iii*) controlling seats by making false reservations, thus infringing upon the lawful rights and interests of the airline or other sale agents or tour operators while selling passenger tickets.

18.15.10. All decisions and concerted practices by airlines, service providers, or operators or associations that prevent, restrict or distort competition are prohibited under these Regulations.

Exemptions of Certain Agreements.

18.15.11. Nothing in this section shall prohibit—

(*i*) a contract or an arrangement where the only parties are or will be wholly owned subsidiary and holding companies ;

(*ii*) a contract of service or a contract for the provision of services in so far as it contains provisions by which a person, not being a body corporate agrees to accept restrictions as to the work, whether as an employee or otherwise, in which that person may engage during or after the termination of the contract ;

(*iii*) contract for the sale of a business or shares in the capital of a company carrying on business in so far as it contains a provision that is solely for the protection of the purchases in respect of the goodwill of the company;

(*iv*) contract or an arrangement in as much as it contains a provision that relates to the remuneration, conditions of employment, hours of work or working conditions of employees ;

(*v*) any act done otherwise than in trade, in concert by passengers, consumers of products and services against the suppliers of those products and services ;

(*vi*) any act done to give effect to a provision of a contract or an arrangement referred to in paragraphs (*i*) to (*v*) of this section ;

(*vii*) any act done to give effect to any intellectual property right, which shall mean a right, privilege, or entitlement that is conferred as valid by or under any enactment in force.

Abuse of dominant position or market power.

18.15.12. For the purposes of these Regulations, one or more airline, service providers or operators hold a dominant position in the relevant market if, singularly (by itself) (including activities involving an interconnected or affiliated company) or collectively :

(*i*) it or they has or have a share of more than twenty five *percent* (25%) of the relevant market ; or (*ii*) it or they has or have the ability to control prices or to exclude competition ; or

(*iii*) it or they behave to an appreciable extent independently of its or their competitors, customers, or passengers.

18.15.13. An airline, service provider or operator abuses a dominant position if it impedes the maintenance or development of effective competition in a market and in particular is engaged in any of the following :

(*i*) restriction of the entry of any other operator into that or any other market ;

(*ii*) preventing or deterring any operator from engaging in competitive conduct in the relevant route or market ;

(*iii*) eliminating or removing any operator from the relevant route or market ;

(*iv*) directly or indirectly imposing unfair, discriminatory or predatory tariffs or fares, purchase or selling prices or other anti-competitive practices through any discount, allowance or rebate practice in relation to the supply of services ;

(*v*) limiting the provision of services to the prejudice of consumers ;

(*vi*) operating capacity on a route or routes at fares that do not cover the avoidable cost of providing the service ;

(*vii*) increasing capacity on a route or routes at fares that do no cover the avoidable cost of providing the service ;

(*viii*) pre-empting airport facilities or services that are required by another air carrier for the operation of its business, with the object of withholding the airport facilities or services from a market ;

(*ix*) to the extent not governed by regulations regarding take-off and landing slots, pre-empting take-off or landing slots that are required by another air carrier for the operation of its business, with the object of withholding the take-off or landing slots from a market ;

(*x*) using commissions, incentives or other inducements to sell or purchase its flights for the purpose of disciplining or eliminating a competitor or impeding or preventing a competitor's entry into, or expansion in, a market ;

(*xi*) altering its schedules, networks, or infrastructure for the purpose of disciplining or eliminating a competitor or impeding or preventing a competitor's entry into, or expansion in a market ;

(*xii*) making the conclusion of agreements subject to acceptance by other parties of supplementary obligations which by their nature, or according to commercial usage, have no connection with the subject of such agreements ;

(*xiii*) engaging in any business conduct that results in the exploitation of its customers and suppliers, including, but not limited to such conduct as exclusive dealing, market restriction or tied selling.

18.15.14. An airline, service provider or operator shall not be treated as abusing a dominant position :

(*i*) if it is shown that its behaviour was exclusively directed to improving the production or distribution of products or to promoting technical or economic progress and consumers were allowed a fair share of the resulting benefit ;

(*ii*) if the effect or likely effect of its behaviour in the market is the result of its superior competitive performance ;

(*iii*) if it seeks to enforce any right under or existing by virtue of any copy right, patent, registered design or trade mark.

18.15.15. An airline, service provider or operator may be treated as abusing its dominant position in enforcing or seeking to enforce the rights referred to in 18.5.14(*ii*), if the Authority is satisfied that the exercise of those rights has the effect of unreasonably lessening competition in the relevant market.

18.15.16. Any conduct on the part of one or more operators which amounts to the abuse of a dominant position in a market is prohibited.

18.15.16.1. NOTIFICATION

18.15.16.2. Mergers, Acquisition, Combinations and Joint Ventures.

Mergers, takeovers, joint ventures or other acquisitions of control in the aviation industry, including interlocking directorships, whether of a horizontal, vertical, or conglomerate nature, should be notified to the Authority when :

(*i*) At least one of the company is established within Nigeria ;

(*ii*) The resultant market share in the aviation industry, or any substantial part of it, relating to any product or service, is likely to create market power ;

(*iii*) At least one of the company derives income in or from Nigeria, arising from the sale and rendering of services in the civil aviation industry or there exists use of the firm's assets in a manner that yields interest, royalties and dividends.

18.15.16.3. No company in the cases under 18.15.16.1 and 18.15.16.2, shall effect a merger until the expiration of a 60 day waiting period from the date of the issuance of the receipt of the notification, unless the Authority shortens the said period or extends it by an additional period of time not exceeding thirty (30) days with the consent of the company concerned with.

18.15.16.4. Notification can be made to the Authority by all the parties concerned, or by one or more of the parties acting on behalf of the others, or by any persons properly authorized to act on their behalf.

18.15.16.5. A single agreement can be notified where a company or person is party to a restrictive agreement on the same terms with a number of different parties, provided that particulars are also given of all parties, or intended parties, to such agreements.

18.15.16.6. Notification shall be made to the Authority where any agreement, arrangement or situation notified under the provisions of the Act or these Regulations has been subject to change either in respect of its terms or in respect of the parties, or has been terminated (otherwise than by effluxion of time), or has been abandoned, or if there has been a substantial change in the situation within 30 days of the event.

18.15.17. PROHIBITION

18.15.17.1. Mergers, take-overs, joint ventures or other acquisitions of control in the aviation industry, including interlocking directorships, whether of a horizontal, vertical or conglomerate nature, are prohibited where the proposed transaction substantially increases the ability to exercise market power either by giving the ability to a company or group of companies acting jointly to profitably maintain prices above competitive levels for a significant period of time or by any other anti-competitive means.

18.15.18. INVESTIGATION

18.15.18.1. Upon the receipt of a notification, the Authority shall :

(*i*) conduct an investigation ;

(*ii*) request for relevant documents ;

(*iii*) hold a hearing and obtain testimonies from the parties, if necessary.

18.15.18.2. If a hearing before the Authority results in a finding against the transaction, such acquisitions or mergers may be prevented or undone whenever they are likely to lessen competition substantially in the aviation industry or in a significant part of the relevant market within the industry.

18.15.18.3. Where a transaction or practice is not expressly prohibited, and the possibility exists for its authorization, the company shall notify the transaction or practice to the Authority, providing full details as requested.

18.15.18.4. Penalties for Civil Violations, Offences and Penalties in Respect of Agreements etc. in Restraint of Trade. If the Authority determines that any person has violated the provisions of this Part, the Authority may :

(*i*) impose such civil penalties or fines in the manner prescribed by the sanctions regime contained in sanctions regime.

(*ii*) prescribe the payment of compensation to any person adversely affected by the violation ;

(*iii*) direct the violator to take any other appropriate corrective measures.

18.15.18.5. Any person who makes or enters into any contract or engages in any arrangement, conspiracy or practice declared unlawful under 18.15.2. or 18.15.3 of these Regulations shall be guilty of an offence and shall be fined in accordance with Part 19 Provisions or a fine of at least two times the amount of profit the person would have made.

18.15.19. Leniency, Concessions, Immunity Programmes and Rules.

Grant of Leniency, Concessions and Immunity

18.15.19.1. The Authority may grant conditional leniency, concessions and immunity for cooperation to persons who offer significant assistance in detecting and proving unfair methods of competition and anti-competitive conduct.

18.15.19.2. Upon the application of a person, the Authority may proceed under any of the following programmes :

(*i*) *Leniency* : Conditional leniency will be granted where an applicant is the first participant in an anti-competitive activity to apply to the Authority and to meet the prescribed conditions. Immunity is 'conditional' in that the holder must continue to meet the prescribed conditions to maintain their immunity status.

(*ii*) *Co-operation* : The Authority may exercise its discretion by taking a lower level of enforcement action, or, for individuals, no action at all, in exchange for information and full, continuing and complete cooperation throughout an investigation and any subsequent proceedings.

(*iii*) *Immunity* : The Authority may grant immunity in appropriate cases as provided under 18.15.19.5.

18.15.19.3. Where a person enables the Authority to detect and or prove the existence of anti-competitive conduct, he may be granted conditional leniency.

18.15.19.4. The Authority may apply reduced penalties to provide incentives for full co-operation that facilitates the Authority's quick and effective investigation with fewer resources.

18.15.19.5. In all applications for leniency and concessions, the applicant must be the first to come forward either before the Authority becomes aware of the violation or before there is sufficient evidence to warrant an investigation or other regulatory action by the Authority.

18.15.19.6. Subject to the requirements set out in 18.15.20., if a violation constitutes criminal offence, the Authority may recommend that immunity be granted to a party in the following situations:

(*i*) the Authority is unaware of the offence, and the party is the first to disclose it ; or

(*ii*) the Authority is aware of an offence, and the party is the first to come forward before there is sufficient evidence to warrant a referral of the matter to the appropriate authorities.

18.15.20. Requirements for Qualification.

18.15.20.1. The following are the relevant requirements to qualify for immunity :

(*i*) The party must terminate its participation in the unlawful activity.

(*ii*) The party must not have coerced others to be party to the unlawful activity.

(*iii*) Where the party requesting immunity is the only party involved in the offence it will not be eligible for immunity.

18.15.20.2. Throughout the course of the Authority's investigation and subsequent referral for prosecutions, a party involved in a leniency, concession, immunity process must provide complete, timely and ongoing co-operation :

(*i*) unless made public by the relevant prosecuting authority, or as required by law, the party shall not disclose its application for leniency, concession, immunity, or any related information, to a third party without the consent of the Authority. Where disclosure is required by law, the party must give notice to and consult with the Authority on how to protect the interests of the investigation in light of the disclosure requirement. The party shall give this notice as soon as it becomes aware of the disclosure requirement ;

(*ii*) the party must reveal to the Authority any and all conduct of which it is aware, or becomes aware, that may constitute a violation of the law and in which it may have been involved ;

(*iii*) the party must provide full, complete, frank and truthful disclosure of all non-privileged information, evidence and records in its possession, under its control or available to it, wherever located, that in any manner relate to the anti-competitive conduct for which leniency, concession or immunity is sought. There must be no misrepresentation of any material facts ;

(*iv*) companies must take all lawful measures to secure the co-operation of current directors, officers and employees for the duration of the investigation and any ensuing proceedings. Companies must also take all lawful measures to secure the cooperation of former directors, officers and employees as well as current and former agents, where doing so will not jeopardize the investigation. Companies shall encourage such persons to voluntarily provide to the Authority all of their non-privileged information, evidence and records, in their possession or under their control, wherever located, that in any manner relate to the anti-competitive conduct ; and (*v*) companies must facilitate the ability of current and former directors, officers, employees and agents to appear for interviews and to provide testimony in administrative and judicial proceedings in connection with the anti-competitive conduct.

18.15.20.3. Parties must co-operate with the Authority's investigation and any subsequent proceedings at their own expense.

18.15.20.4. If the first party to apply under any of the programmes fails to meet the requirements above, a subsequent party that does meet the requirements qualify to participate.

18.15.20. The Process for Leniency, Concession or Immunity.

18.15.20.1. A person may initiate a request for leniency, concession or immunity by communicating with the Director-General to discuss the possibility of participating in a programme.

18.15.20.2. The request to the Authority to participate in the programme may be made by an applicant's legal representative.

18.15.20.3. If the authority decides that the applicant participates in the programme, the applicant will be required to provide a detailed description of the unlawful activity and to disclose sufficient information for the Authority to determine whether it might qualify for the programme.

18.15.20.4. The Authority will require existence of material with sufficient detail and certainty and also seek assurances as to the nature of any records the applicant can provide, the evidence or testimony a potential witness can give and how probative the evidence is likely to be. The Authority may request an interview with one or more witnesses, or an opportunity to view certain documents, prior to determining whether the applicant qualifies for the programme.

18.15.20.5. If the Authority determines that the applicant has qualified to participate in the programme the authority *may* execute the relevant program agreement with the applicant.

18.15.20.6. After the party enters into an agreement with the Authority, full disclosure and cooperation with the investigation and any ensuing proceedings is essential.

18.15.20.7. Parties are required to voluntarily provide the Authority with all non-privileged information, evidence and records that in any manner relate to the anti-competitive conduct. Witnesses will be expected to attend interviews and may be called upon to testify in administrative or court proceedings. The full disclosure process will be conducted with the understanding that the Authority will not use the information against the party, unless the party fails to comply with its agreement.

18.15.20.8. The Authority may revoke a party's benefits under a programme, and take appropriate action against the party, if that party fails to comply with any of the terms and conditions under its agreement.

18.15.20.9. Where the Authority determines that a party has failed to fulfill the terms and conditions set out in its agreement, the Authority will provide fourteen (14) days written notice to the party before revoking the agreement.

NIGERIA CIVIL AVIATION REGULATIONS

PART 18—IMPEMENTING STANDARDS

IS:18.2.2.2(A)—(1) *General*.

Requirements for Grant of Air Transport Licence (ATL).

(*i*) Application for grant of an Air Transport Licence (ATL) shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorised by the applicant.

(2) *Requirements*.

(*i*) The application must be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the expiration of the existing ATL.

The application for the grant of ATL must contain the following particulars :

(*a*) Name and address of applicant ;

(*b*) Type(s) of air services to be provided ;

(*c*) Proposed operational base of applicant ;

(*d*) Details of proposed routes to be operated where applicable ;

(*e*) Number and types of proposed aircraft to be utilized ; and

(*f*) Time and frequency of the services.

(*ii*) The following supporting documents are required for processing the Application :

(*a*) Certified true copy of the Certificate of Incorporation of the Company.

(*b*) Certified true copy of :

(1) the Memorandum and Articles of Association ;

(2) Particulars of the Directors of the Company (Form CAC7) ;

(3) Statement of Share Capital/Return of Allotment (Form CAC2) with minimum PAID-UP share capital of :

₦500,000,000.00 (five hundred million Naira) for domestic operations ;

₦1,000,000,000.00 (one billion Naira) for regional operations ; and

₦2,000,000,000.00 (two billion Naira) for intercontinental operations, at least one member of the board of directors must be an aviation professional in line with the provisions of the Act. In addition, the majority shareholding shall be held by Nigerian(s) ;

(*c*) Current tax clearance certificates of the company and of each of the directors ;

(*d*) Detailed business plan of the company indicating among other things, the company's vision, mission, market analysis and strategy, company's ownership structure, personnel plan, fleet acquisition plan, financial plan including source(s) of finance, balance sheet, break-even analysis, pro-forma income projections (profit and loss statements), cash flow analysis, proposed fares for passengers or cargo, etc and other standard business plan requirements showing the road map of the applicant's strategy to provide efficient services in respect of safety, regularity, reliability and profitability of operations ;

(*e*) Publication of Notice of the application in two (2) national daily newspapers. The publication should contain information on the application submitted to the Authority for the grant of ATL ;

(*f*) Evidence of the applicant's financial solvency to undertake the business. Applicants are expected to prove that they are financially solvent to run operations for a period of three (3) months from the start of operations without resorting to any income from their operations ;

(*g*) Duly completed application forms (to be obtained from the Authority) ; and

(*h*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule.

(3) *Publication in the official gazette.*

The Authority will cause the notice of application to be published in the Official Government Gazette.

(4) *Home or operational base of the airline.*

The applicant will be required to liaise with the Airport Service Providers and or Federal Airports Authority of Nigeria (FAAN) regarding approval of its home or operational base.

(5) *Annual utilization fee*.

Upon receipt of ATL, an annual utilization fee shall be paid to the Authority as stipulated in the NCAA Fees Schedule

(6) *Additional information.*

On receipt of an application, the Director-General may request for additional information from the applicant as deemed necessary.

Requirements for Renewal of Air Transport Licence (ATL).

IS:18.2.2.2(B)—(1) *General.*

An applicant for the renewal of its ATL shall meet the requirements of IS 18.2.2.2(A) with exception of items (2)(*ii*)(*a*), (*b*), (*d*), (*e*), (*f*) & (3)

(2) *Requirements.*

The following supporting documents are required for processing the application :

(*a*) NCAA Receipt of payment for processing and utilization fees to the Authority as stipulated in the NCAA Fees Schedule.

(*b*) Evidence of utilization of ATL indicating the following details :

(*i*) Number and type(s) of aircraft in use ;

(*ii*) Insurance of aircraft in use, including passenger, cargo and third party ;

(*iii*) Routes operated ; and

(*iv*) Total number of passengers, cargo and mail carried during the period of operation of the expiring licence.

(*c*) Evidence of submission of monthly statistical returns of operations to the Authority.

(*d*) Evidence of filing of fares and tariffs with the Authority.

(*e*) Evidence of regular and up-to-date payment of aviation charges.

(3) *Validity of Renewed ATL and Utilization Fee.*

(*i*) The validity of a renewed ATL shall be five (5) years.

(*ii*) An annual utilization fee shall be paid to the Authority as stipulated in the NCAA Fees Schedule.

Requirements for Grant of Airline Operating Permit (AOP).

IS:18.2.3.(A)—(1) *General.*

(*i*) Application in respect of an Airline Operating Permit (AOP) shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the expected date of utilization of the AOP.

(2) *Requirements.*

(*i*) The application for the grant of AOP must contain the following particulars :

(*a*) Name and address of applicant ;

(*b*) Type of services to be provided ;

(*c*) Number and types of aircraft to be utilized ; and

(*d*) Proposed operational base of applicant.

(*ii*) The following supporting documents are required for processing of the application :

(*a*) Certified true copy of the Certificate of Incorporation of the Company.

(*b*) Certified true copy of :

(1) The memorandum and articles of association.

(2) Particulars of the Directors of the Company (Form CAC7).

(3) Statement of Share Capital/Return of Allotment (Form CAC2) with minimum PAID-UP share capital of five hundred million Naira (N500,000,000.00).

(*c*) At least one member of the board of directors must be an aviation professional in line with the provisions of the Act. In addition, the majority shareholding shall be held by Nigerian(s) ;

(*d*) Current tax clearance certificates of the company and of each of the directors ;

(*e*) Detailed business plan of the company indicating among other things, the company's vision, mission, market analysis and strategy, company's ownership structure, personnel plan, fleet acquisition plan, financial plan including source(s) of finance, balance sheet, break-even analysis, pro- forma income projections (profit and loss statements), cash flow analysis, proposed fares for passengers or cargo, etc and other standard business plan requirements showing the road map of the applicant's strategy to provide efficient services in respect of safety, regularity, reliability and profitability of operations ;

(*f*) Publication of Notice of the application in two (2) national daily newspapers. The publication should contain information on the application submitted to the Authority for the grant of AOP ;

(*g*) Evidence of the applicant's financial solvency to undertake the business. Applicants are expected to prove that they are financially solvent to run operations for a period of three (3) months from the start of operations without resorting to any income from their operations ;

(*h*) Duly completed application forms (to be obtained from the Authority) ;

(*i*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ; and

(*j*) Evidence of adequate insurance cover for passengers, cargo and third party liability as specified in this regulation.

(3) *Publication in the Official Gazette.*

The Authority will cause the notice of application to be published in the Official Government Gazette.

(4) *Home or operational base of the airline.*

The applicant will be required to liaise with the Airport Service providers and or Federal Airports Authority of Nigeria (FAAN) regarding approval of its home or operational base.

(5) *Utilization fee.*

Upon receipt of the AOP, an annual utilization fee shall be paid to the Authority as stipulated in NCAA Fees Schedule.

(6) *Additional information.*

On receipt of an application for an AOP, the Director-General may request for additional information from the applicant as may be deemed necessary.

Requirements for Renewal of Airline Operating Permit (AOP).

IS:18.2.3.(*b*)—(1) *General*

An applicant for the renewal of its ATL shall meet the requirements of IS 18.2.3.(A) with exception of items (2)(*ii*)(*a*), (*b*), (*d*), (*e*), (*f*), (*g*) & (3).

(2) *Requirements.*

The following supporting documents are required for processing the application :

(*a*) NCAA Receipt of payment of processing and utilization fees to the Authority as stipulated in NCAA Fees Schedule ;

(*b*) Evidence of utilization of Permit vides the following details :

(*i*) Number and type(s) of aircraft in use ;

(*ii*) Insurance of aircraft in use, including passenger, cargo and third party ;

(*iii*) Routes operated ; and

(*iv*) Total number of passenger, cargo and mail carried during the period of operation of the expiring permit.

(*c*) Evidence of submission of monthly statistical returns of operations to the Authority.

(*d*) Evidence of regular and up to date payment of aviation charges.

(3) *Validity of Renewed Permit and Utilization Fee*

(*i*) The validity of a renewed AOP shall be three (3) years.

(*ii*) An annual utilization fee shall be paid to the Authority as stipulated in the NCAA Fees Schedule.

(4) *Additional information*

On receipt of an application for an AOP, the Director-General may request additional information from the applicant as may be deemed necessary.

Requirements for Grant of Permit for Non-Commercial Flights (PNCF).

IS:18.2.4(A)—(1) *General*

(*i*) Application for grant of Permit for Non-Commercial Flights (PNCF) shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application for renewal of PNCF must be submitted to the Director- General, Nigerian Civil Aviation Authority on or before a date not less than six (6) months to the expiration of the existing PNCF.

(2) *Requirements*

(*i*) The application for the grant of the PNCF must contain the following particulars :

(*a*) Purpose for which the aircraft will be used ;

(*b*) Number and type(s) of aircraft to be operated ;

(*c*) Area of operation of flights (i.e. whether within and outside Nigeria).

(*ii*) The following supporting documents are required for processing the application :

(*a*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*b*) Source(s) of funds for the maintenance and safe operation of the aircraft ;

(*c*) Tax clearance certificate(s) of the owner of the aircraft or company and its directors ;

(*d*) Certified true copy of certificate of incorporation and memorandum of article of association of the company (where applicable) ;

(*e*) Personal identification document (such as international passport, drivers license etc) and curriculum vitae where applicant is an individual).

(3) *Annual utilization fee*

Upon receipt of PNCF, an annual utilization fee shall be paid to the Authority as stipulated in the NCAA Fees Schedule

(4) *Variation fee*

Holders of PNCF shall be required to pay a variation fee to the Authority as stipulated in the NCAA Fees Schedule for variation of their Permit.

(5) *Additional information*

(*i*) On receipt of an application for a PNCF, the Authority may request for additional information from the applicant as may be deemed necessary ;

IS:18.2.4.(B)—(1) *General*

Requirements for Renewal of Permit for Non-Commercial Flights (PNCF).

An applicant for the renewal of its PNCF shall meet the requirements of IS 18.2.4.(A) with exception of items (2)(*ii*)(*b*), (*d*) & (*e*).

IS:18.2.5.(A)—(1) *General*

Requirements for Grant of Air Travel Organizer's Licence (ATOL).

(*i*) Application for the grant of an Air Travel Organizer's Licence (ATOL) shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the expected date of utilization of the ATOL.

(2) *Requirements*

(*i*) The application for the grant of ATOL should contain inter alia the following information :

(*a*) Types of Travels and Tours ;

(*b*) Principal Catchment Areas ;

(*c*) Principal Destination(s) ; and

(*d*) Flight Arrangement(s).

(*ii*) The following supporting documents are required for processing the application :

(*a*) Certified true copy of the certificate of incorporation of the company.

(*b*) Certified true copy of :

(1) the memorandum and articles of association ;

(2) Particulars of the Directors of the Company (Form CAC7) ;

(3) Statement of Share Capital/Return of Allotment (Form CAC2) with minimum PAID-UP share capital of five million (₦5,000,000.00) Naira.

(*c*) Current tax clearance certificates of the company and of each of the directors.

(*d*) Performance Bond of ₦7.5 million from a Bank or Insurance Company. The Bond should cover the two (2) year validity period of the ATOL when issued.

(*e*) An Audited Statement of Accounts for the last three (3) years for an existing company or certified opening balance sheet in case of new company.

(*f*) Publication of Notice of the application in two (2) national daily newspapers. The publication should contain information on the application submitted to the Authority for the grant of an ATOL.

(*g*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule.

(3) *Additional Requirements for Multiple Flights*

An ATOL holder wishing to carry out series of holiday packages at a particular time over a period of two (2) weeks or more such as religious pilgrimage, etc in addition to the initial N7.5million Bond earlier submitted during the processing of its application, will be required to produce a Bank/Insurance Bond based on 15 per cent of forecast turnover.

Requirements for Renewal of Air Travel Organizer's Licence (ATOL).

IS:18.2.5.(B)—(1) *General*

An applicant for the renewal of its ATOL shall meet the requirements of IS 18.2.5.(A) with exception of items (2)(*ii*)(*a*), (*b*), (*c*), (*e*) & (*f*)

(2) *Requirements*

The following supporting documents are required for processing the application :

(*a*) Evidence of utilization of the expired ATOL to wit the following documents :

(*i*) Types of travel arrangements made, whether whole plane charter or otherwise ;

(*ii*) Name(s) of aircraft operator(s) or airline(s) used ;

(*iii*) Types of tours organized and destination ; and

(*iv*) Total number of passengers carried for the various tour packages during the period of operation of the expiring licence.

(*b*) Audited Statement of Account or Auditor's report of operation carried out by the company.

Requirements for Grant of Permit for Aerial Aviation Services (PAAS).

IS:18.2.6.2.(A)—(1) *General*

(*i*) Application for grant of a Permit for Aerial Aviation Services (PAAS) shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application shall be submitted to the Director-General on or before a date not less than six (6) months to the expected date of utilization of the PAAS.

(2) *Requirements*

(*i*) The application for the grant of PAAS must contain the following particulars :

(*a*) Name and address of applicant ;

(*b*) Type(s) of air services to be provided ;

(*c*) Proposed operational base of applicant ;

(*d*) Details of proposed routes to be operated where applicable ;

(*e*) Number and types of proposed aircraft to be utilized ; and

(*f*) Time and frequency of the services.

(*ii*) The following supporting documents are required for processing the application :

(*a*) Certified true copy of :

(*i*) the certificate of incorporation of the company ;

(*ii*) the memorandum and articles of association ;

(*iii*) Particulars of the directors of the company (Form CAC7) ;

(*iv*) Statement of Share Capital/Return of Allotment (Form CAC2) with minimum PAID-UP share capital of ₦20,000,000.00 (twenty million Naira) ; and at least one member of the board of directors must be an aviation professional in line with the provisions of the Act. In addition, the majority shareholding shall be held by Nigerian(s) ;

(*b*) Current tax clearance certificates of the company and of each of the directors ;

(*c*) Detailed business plan of the company indicating among other things, the company's vision, mission, market analysis and strategy, company's ownership structure, personnel plan, fleet acquisition plan, financial plan including source(s) of finance, balance sheet, break-even analysis, pro- forma income projections (profit and loss statements), cash flow analysis and other standard business plan requirements showing the road map of the applicant's strategy to provide efficient services.

(*d*) Evidence of the applicant's solvency to undertake the business.

(*e*) Duly completed application forms (to be obtained from the Authority).

(*f*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule.

(3) *Publication in the official gazette*

The Authority will cause the notice of application to be published in the Official Government Gazette.

(4) *Annual utilization fee*

Upon receipt of PAAS, an annual utilization fee shall be paid to the Authority as stipulated in NCAA Fees Schedule.

(5) *Additional information*

On receipt of an application for a PAAS, the Director-General may request for additional information from the applicant as may be deemed necessary.

Requirements for Renewal of Permit for Aerial Aviation Services (PAAS).

IS:18.2.6.2.(B)—(1) *General*

An applicant for the renewal of its PAAS shall meet the requirements of IS 18.2.6.2.(A) with exception of items (2)(*ii*) (*a*), (*c*), (*d*) & (3)

(2) *Requirements*

The following supporting documents are required for processing the application :

(*a*) Evidence of utilization of PAAS.

(*b*) Evidence of regular and up-to-date payment of aviation charges.

Requirements for Designation of Nigerian Airlines on International Routes.

IS:18.4.1.1. These requirements shall apply to Nigerian airlines seeking designation on international routes.

PART ONE

(1) *General*

(*i*) Application for designation on international routes shall be made in writing to the Minister responsible for Aviation. The application shall thereafter be forwarded to the Authority for assessment.

(*ii*) The application shall contain the following particulars :

(*a*) Details of routes to be operated ;

(*b*) Number and type(s) of aircraft to be used for the operation(s) ;

(*c*) Details of airline's existing fleet, including number and age of aircraft ;

(*d*) Point(s) of departure and entry in Nigeria ; and

(*e*) Point(s) of entry and departure in the country/countries the airline intends to operate to.

(2) *Requirements*

The following supporting documents are required for processing the application :

(*a*) Four (4) copies of certified true copy of the certificate of incorporation of the company.

(*b*) Four (4) copies of certified true copy of :

(*i*) The memorandum and articles of association ;

(*ii*) Particulars of the directors of the company (Form CAC7) ;

(*iii*) Statement of Share Capital/Return of Allotment (Form CAC2) with minimum PAID-UP share capital of l to N1 billion (one billion Naira) for regional routes and N2 billion (two billion Naira) for international routes.

(*c*) A copy of valid Air Transport License (ATL) of the applicant.

(*d*) A business Plan on the Operation of the proposed route(s).

The business plan shall contain but not necessarily be limited to the following :

(*i*) Route viability analysis including detailed projected expenditure and revenue forecasts. The expenditure should be on such operating cost items as fuel, airport charges, handling charges, aircraft lease or depreciation, aircraft maintenance, catering, insurance, personnel etc. While the revenue figures should include proposed load factors, fares and tariffs both at base and outstations, etc. ;

(*ii*) A projected Balance Sheet including profit and loss account and current assets and liabilities for the next two (2) years (24 months) ;

(*iii*) A projected cash flow statement and liquidity plan for the first three (3) months of operation ; and

(*iv*) The assumptions used for the computations.

(*e*) Evidence of ability to meet fixed and operational costs incurred from operations for the first three (3) months without generating any income ; and

(*f*) Evidence of ability to meet its actual and potential obligations for a period of twenty-four (24) months from the start of operations ;

(*g*) The applicant is also required to submit the following :

(*i*) Details of Insurance Policy/Policies covering hull, passenger/cargo, crew and the third Party. Limits of this cover shall be in accordance with the provision of the Civil Aviation Act, the Regulation, Rules, Orders made there under.

(*ii*) Details of airline ownership structure and operational control of the airline.

(*iii*) Details of management team.

(*iv*) Mode of acquisition of the aircraft proposed for utilization on the route(s) and evidence of ownership of more than one aircraft.

(*v*) Technical and maintenance arrangements in place or being put in place.

(*vi*) Details of the airline security programme in accordance with National Civil Aviation Security Programme and carriage of Dangerous Goods in accordance with Part 15 of Nig. CARs, ICAO Doc. 9284 Technical Instruction for Safe Transport of Dangerous Goods by Air.

(*vii*) Evidence of three (3) years audited statement of account for existing airlines and certified opening balance sheet for new Airlines.

(*viii*) Current Tax Clearance Certificates of the company and its Directors.

(*ix*) Proposed arrangements put in place or to be put in place for fuelling of aircraft, catering and handling of passengers/cargo and aircraft ; as well as organizational provisions at outstations.

(*x*) Evidence and details of applicant's computer reservation system.

(*xi*) Details of communication network in place.

(*xii*) Ticketing sales arrangements.

(*xiii*) Samples of tickets, baggage tags, manifest and other related documents necessary to conduct a commercial flight

(*xiv*) Evidence of membership or arrangement to be a member of IATA.

(*xv*) Existing or proposed commercial arrangement with other operators (e.g. alliance, code share, interline, sales agency, etc) (if any).

(*xvi*) Details of technical partners (if any).

(*xvii*) Details of applicants experience on scheduled domestic passenger operations and international passenger/cargo and charter operations for operating airlines. While new airlines must show evidence of capability and competence in terms of finance, personnel, equipment and organization to carry out international passenger/cargo operations.

(*xviii*) Evidence of meeting all financial obligations associated with its operations such as aviation charges if required.

(*xix*) Additional Information if required.

The Authority shall forward its technical report with appropriate recommendations to the Minister.

Part Two

Requirements for Grant of Air Carrier's Permit to Designated Nigerian Airlines On International Routes.

IS:18.4.1.1B. A designated Nigerian Airline wishing to obtain an Air Carrier's Permit (ACP) for international operations shall fulfill the following requirements :

(*i*) Make a payment of a non-refundable processing fees for African or/ and intercontinental routes as stipulated in the NCAA Fees Schedule.

(*ii*) The designated airline shall also submit the following documents :

(*a*) A revised business plan on the proposed operations of the airline.

(*b*) Evidence of detailed arrangements of the proposed destinations to support the intended operations.

(*c*) Evidence of authorized share capital commensurate with the scope of operation. For African routes ₦1 billion, while intercontinental routes shall be ₦2 billion.

(*d*) Evidence of insurance policy for hull, passenger, cargo, third party liability in line with international standards.

(*e*) Evidence of organizational exposition detailing airline ownership and control, airline management structure and details of the airlines operations including engineering, marketing, sales and promotion, flight operations, flight planning and scheduling, arrangement for aircraft fuelling, handling, receipt and dispatch, catering and customer services.

(*f*) Evidence of Computer Reservation System and product distribution and or support system.

(*g*) Evidence of ownership or operational control of aircraft.

(*iii*) An airline that has been approved for designation by government on international routes shall seek from the Authority, the variation of its Air Operator's Certificate (AOC) to cover routes and aircraft types to be operated.

(*iv*) An airline that has varied its AOC and obtained an Air Carrier's Permit (ACP) for international routes will have its designation process finalized by the Ministry through the exchange of diplomatic notes.

(*v*) Government reserves the right to withdraw from any designated airline, routes not operated consistently within a period of twelve (12) months for African routes and twenty four (24) months for intercontinental routes. Where a designated air carrier suspends operation on a route for more than 12 months, government reserves the right to reassign the routes to other interested airline.

(*vi*) Designated airlines shall pay destination inspections fees to the Authority and applicable negotiation or re-negotiation of applicable Bilateral Air Services Agreements (BASA).

Conditions and Privileges of Air Carrier's Permit (ACP) On International Routes.

IS:18.4.1.1.C.—(*i*) All commercial alliances, code share arrangements etc being entered into by any designated airlines on allocated routes shall be submitted to the Ministry and the Authority for approval.

(*ii*) No right on the designated routes can be subcontracted by an airline without approval of the Minister.

(*iii*) Any airline that abandons a route for a period of twelve (12) months shall have the route withdrawn and given to another interested airline.

(*iv*) An airline shall ensure compliance with its approved seasonal schedules. The Authority shall keep records of the dispatch reliability of airlines. Any airline that fall short of the benchmark set by the Authority will have its permit withdrawn.

(*v*) An airline must put in place, a co-operative arrangement to cover its scheduled operations in case of unavoidable technical and operational problems.

(*vi*) An Air Carrier's Permit (ACP) will be considered for revocation and the top management of the airline liable for prosecution if :

(*a*) the airline and or its agents are found engaging in criminal activities that can tarnish the image of the country.

(*b*) the airline by omission or commission promotes the interest of other nations above that of Nigeria.

(*c*) the airline and or its agent fail(s) to meet safety and security standards, as well as financial obligations to creditors.

(*d*) Any other condition and privileges that may be specified by the authority from time to time.

Requirements for the Commencement of Operations by Designated Foreign Airlines on Nigerian Routes.

IS:18.5.1.1.3 A.—(1) *General*

Foreign airlines applying to operate scheduled services into and out of Nigeria shall fulfill the under listed requirements :

(*i*) be designated under an existing Bilateral Air Services Agreement (BASA) between its government and Nigeria.

(*ii*) submit necessary supporting documents through diplomatic channels, to the Nigerian aeronautical authority. Details of such designation must be in accordance with the provisions of the existing BASA, upon which such designation is being made.

(*iii*) Designated airlines must fulfill the requirements of Part 10 of the Nigerian Civil Aviation Regulations (Nig.CARs) on Commercial Air Transport by Foreign Air Carriers within Nigeria before the FCOP can be issued by the Authority.

(2) *Requirement*

The following documents shall be provided by the designating country or airline shall include :

(*a*) Details of the Designated Airline including :

(*i*) Name of Airline ;

(*ii*) Address of its principal place of business (Head Office) ;

(*iii*) Details of Airline's ownership structure (majority ownership shall rest with the nationals of the State designating the airline) ;

(*iv*) Nationality of Airline ;

(*v*) Address in Nigeria;

(*vi*) Names and address of the Airline's representative(s) in Nigeria ;

(*vii*) Proposed ground handling company to be used ;

(*viii*) Aircraft type(s) to be utilized for the proposed operation ; and

(*ix*) Aircraft configuration and specifications.

(*b*) *Airline's Aircraft Documents*

(*i*) Air Operator's Certificate (AOC).

(*ii*) Evidence of comprehensive insurance cover for aircraft, passenger, cargo and third party liabilities.

(*iii*) Certificate of aircraft Registration (for each Aircraft) to be operated on the route.

(*iv*) Certificate of Airworthiness (for each Aircraft) to be operated on the route.

(*c*) *Airline Security Manual*

The designated airline shall submit a copy of its Security Manual which should be in accordance with The National Civil Aviation Security Programme.

(*d*) *Dangerous Goods Manual*

The designated airline shall submit a copy of its Dangerous Goods Manual which should be in accordance with Technical Instruction For The Safe Transport of Dangerous Goods by Air Doc. 9284, Part 15 of Nig.CARs.

(*e*) *Other Supporting Documents*

(*i*) Proposed tariff on the route.

(*ii*) Proposed flight schedule and timetable.

(*iii*) Existing and proposed commercial arrangements with other operators i.e. alliance, code-share, interline, sales agency, etc.

(*iv*) Evidence that substantial ownership and effective control of the airline are vested in the designating State or its nationals.

(*v*) Any other licence or approvals issued by the aeronautical authorities of the airline's designating country.

Base Inspection.

The Authority's safety inspectors shall carry out safety assessment audit of the airline's base prior to the issuance of FCOP and commencement of operations.

Requirements for Introduction and Revision of Aviation Charges.

IS:18.7.3.1. Any airport operator, air navigation service provider or aero-meteorological service provider intending to introduce or revise charges shall submit to the Authority, an application for approval to introduce or revise the charges. The application which shall be addressed to the Director General of the Authority shall be submitted at least sixty (60) days prior to the introduction of the new charges, fees and tariffs. The application shall be accompanied with the necessary documents justifying the need for the introduction or revision of the charges, fees and tariffs.

These documents shall include but not limited to the following :

(*i*) Financial projections based on existing charges, fees and tariffs.

(*ii*) Financial projections based on proposed charges, fees and tariffs.

(*iii*) Minutes of meeting between the operator and the users of the service in accordance with ICAO Doc.9082.

The Authority may require additional information or documents and invite the operator to meetings, if necessary.

Nigeria National Facilitation Programme (NNFP).

IS:18.8.14.—(*i*) The Nigeria National Facilitation Programme (NNFP), shall be in conformity with the provisions of ICAO Annex 9 on Facilitation.

(*ii*) *Purpose of the NNFP*

The purpose of this NNFP is to facilitate border-crossing formalities which must be accomplished with respect to aircraft engaged in international operations and their passengers, crew and cargo, in line with the Chicago Convention, 1944.

(*iii*) *Scope of the NNFP*

The NNFP contains applicable Articles of the Chicago Convention and the responsibilities for implementing the Articles in accordance with the Standards and Recommended Practices (SARPs) of Annex 9 on Facilitation.

(*iv*) *Organization and Management of NNFP*

The primary responsibility of the NNFP shall rest with the Director-General, while the implementation shall be through the National Facilitation Committee and the Airport Facilitation Committees.

(*v*) *Composition of the National Facilitation Committee*

The National Facilitation Committee shall be headed by the Director-General of NCAA and made up of representatives of the following organizations :

(*a*) NCAA ;

(*b*) Aviation Ministry ;

(*c*) The Airport Operators ;

(*d*) Nigeria Customs Services ;

(*e*) Nigeria Immigration Services ;

(*f*) Nigeria Police Force ;

(*g*) Foreign Affairs Ministry;

(*h*) Nigerian Agricultural Quarantine Service ;

(*i*) State Security Service ;

(*j*) Nigerian Drug Law Enforcement Agency ;

(*k*) Port Health ;

(*l*) Nigerian Airspace Management Agency ;

(*m*) Tourism ;

(*n*) Airline Operators ; and

(*o*) National Aviation Security Committee.

(*vi*) *Guidelines for National Facilitation Committee*

(*a*) The Nigeria National Facilitation Committee shall be responsible for implementation of the application Articles of the Chicago Convention as follows :

(*i*) *Article 12—Landing at Customs Airport*

The Nigeria National Facilitation Committee shall :

(*a*) Designate Customs airports in Nigeria ;

(*b*) Develop procedures through which operators of scheduled and non- scheduled services may request permission to land or depart from customs airports ; and

(*c*) Arrange for border inspection services at customs airports.

(*ii*) *Article 13—Entry and Clearance Regulation*

The Nigeria National Facilitation Committee shall :

(*a*) Develop programmes for control of security problems such as document fraud, illegal migration, smuggling and touting ;

(*b*) Support the interested border control agencies in the establishment and maintenance of effective inspection systems at airports, and in their efforts to rationalize their respective procedures ; and

(*c*) Co-ordinate preparations for clearing large numbers of passengers, especially during holy pilgrimages.

(*iii*) *Article 14—Prevention of Spread of Disease*

The Nigeria National Facilitation Committee shall :

(*a*) Establish, review and amend as necessary, the national policies regarding prevention of the spread of contagious diseases by air, for example, aircraft disinfection, public health-related quarantine programmes and screening measures to be applied in a health emergency.

(*iv*) *Article 22—Facilitation of Formalities*

The Nigeria National Facilitation committee shall :

(*a*) Establish, review and amend as necessary, the national regulations which implement the State's customs, immigration and quarantine laws pertaining to international movements by air.

(*v*) *Article 23—Customs and Immigration Procedures*

The Nigeria National Facilitation Committee shall :

(*a*) Establish and amend as appropriate, customs and immigration and immigration procedures carried out at Nigerian airports, to harmonize them with the standards and recommended practices set forth in Annex 9 ;

(*b*) Support and advocate the national issuance of passports and other travel documents in accordance with ICAO specifications in Doc 9303-Machine Readable Travel documents.

(*vi*) *Article 37—Adoption of International Standards and Procedures*

The Nigeria National Facilitation Committee shall :

(*a*) Participate in the development of ICAO Annex 9 ; and

(*b*) Review national procedures periodically in order to ensure harmonization with the provisions of Annex 9.

(*vii*) *Article 38—Departures from International Standards and Procedures*

The Nigeria National Facilitation Committee shall :

(*a*) Periodically review conformity by all relevant agencies with the provisions of Annex 9 and notify ICAO of differences between national practices and the relevant standards.

(*b*) *Schedule of Meeting*

The Nigeria National Facilitation Committee (NNFC) shall meet bi-annually except in cases of emergency. Venue of meetings shall be as determined by the Chairman of the Committee.

Composition of the Airport Facilitation Committees.

IS: 18.8.15.2A. The Airport Facilitation Committees shall be headed by the Airport Managers and made up of representatives of the following organizations or agencies, where applicable :

(*a*) Customs ;

(*b*) Immigration ;

(*c*) Quarantine ;

(*d*) State Security Service ;

(*e*) NDLEA (Narcotics) ;

(*f*) Port Health ;

(*g*) NCAA ;

(*h*) FAAN ;

(*i*) NAMA ;

(*j*) Tourism ; and

(*k*) Airline operators.

Terms of Reference of Airport Facilitation Committee.

IS:18.8.15.2.B.—(*i*) To implement the policies and directives of the National Facilitation Committee.

(*ii*) To liaise with Airport Security Committee to ensure that security in the airports do not hinder smooth passage of passengers, crew, cargo, mail and aircraft.

(*iii*) To review reports of activities relating to facilitation at the airports and make suggestion(s) for improvement.

(*iv*) To hold quarterly meetings except in case of emergency. The venue of the meetings shall be as determined by the Chairman of the Airport Facilitation Committee.

(*v*) The Airport Facilitation Committee shall devise its own rules of procedure.

Composition of the Airport Slot Allocation Committee.

IS:18.8.6.2.A. The Airport Slot Allocation Committee shall be headed by the Airport Manager and made up of representatives of the following organizations or agencies :

1. NCAA ;
2. FAAN ; and
3. NAMA.

Terms of Reference/ Functions of the Airport Slot Allocation Committee.

IS:I8.8.6.2.B.—(*i*) To formulate the rules for the allocation and exchange of slots at designated international airports in Nigeria, on a fair, transparent and non-discriminatory basis.

(*ii*) To coordinate and monitor the scheduling process.

(*iii*) To hold quarterly meetings except in case of emergency. The venue of the meetings shall be as determined by the Chairman of the Airport Slot Allocation Committee.

(*iv*) The Airport Slot Allocation Committee shall determine its own rules of procedure.

Requirements for Licensing Ground Handling Companies Implementing Standards.

IS:18.9.1.2.—(*i*)(*a*) Requirements for Licensing Ground Handling Companies.

A. *Procedure for Application*

(*i*) Application for licence as a ground handling company shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA) ;

(*ii*) The application shall be signed by a person duly authorized by the applicant ; and

(*iii*) The application shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the desired commencement of operations.

B. *Requirements*

The application for the licence must contain the following particulars :

(*i*) Name and address of applicant ;

(*ii*) The type of ground handling services to be provided ; and

(*iii*) Proposed airport or airports where applicant intends to provide the service(s).

C. *Pre-Qualification Stage*

The applicant is expected to fulfill the following requirements :

(*i*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*ii*) Obtain and complete pre-qualification processing forms and return same to the Authority with evidence of payment of the non-refundable processing fee ;

(*iii*) Submit the following supporting documents for processing of the application :

(*a*) Copy of certified true copy of certificate of incorporation of company ;

(*b*) Copy of certified true copy of memorandum and articles of association of the company ;

(*c*) Statement of Share Capital/Return of Allotment of Shares (Form CAC2) indicating a minimum authorized share capital of five hundred million Naira (₦500,000,000.00) ;

(*d*) Copies of tax clearance certificates of the company and of each of the Directors for the last three (3) years ;

(*e*) Company exposition detailing the ownership and management structure, company's/promoters' experience in the area of the proposed services it intends to provide, etc. ;

(*f*) Comprehensive details with documentary evidence of technical partner including name, address, experience, nature of partnership arrangements etc. ;

(*g*) Evidence of financial capability to undertake the business ;

(*h*) Proposed adequate Insurance Policy and/or insurance arrangement being put in place ;

(*i*) The Authority shall during the course of processing the application, forward relevant documents to the Ministry of Aviation to enable it seek on behalf of the applicant, security clearance, from the Presidency. The shareholders of the company will be required to appear at the Headquarters of the State Security Services in Abuja for documentation..

(*j*) A copy of a detailed business plan on the operation indicating, among other things :

(*i*) Proposed services to be rendered such as passenger handling, baggage handling, ramp services, freight and mail services, flight operations, crew services, surface transport services, aircraft services, catering, etc. ;

(*ii*) Marketing analysis including market segments, target market and customers, customers' characteristics, customers' needs, etc. ;

(*iii*) Competitive analysis such as industry overview, nature of competition, primary competitors, competitive products/services, opportunities, threats and risk, etc. ;

(*iv*) Marketing and Sales. These should address who the major customers will be and how they will be reached, marketing strategies to be used etc. ;

(*v*) Scope of applicant's operations giving comprehensive details of facilities and equipment required and their cost, management structure, staffing plan (employment plans, training and remuneration), operational procedure etc. ;

(*vi*) List of key personnel (including the safety and security managers) with details of their qualifications, skills, experience etc. Copies of their curriculum vitae should be provided ; and

(*vii*) Financial plan including estimated costs of setting up the business, Projected revenue, scheme of charges, profit and loss projection, cash flow projection, balance sheet projection, etc (the assumptions used for the computations should also be stated).

(*k*) Operational Manual containing the company's proposed Standard Operating Procedure on the services to be rendered. This should contain details of how the operations will be conducted in accordance with IATA Ground Handling Manual. This should also contain a sample of the Service Level Agreements (SLAs) the applicant intends to have with the airlines ;

(*l*) Applicant's Safety Management System (SMS) Manual ;

(*m*) Applicant's Security Manual which shall be in compliance with the National Civil Aviation Security Programme (NCASP) and showing its understanding of the relevant provisions of ICAO Annexes such as Annex 9 on Facilitation and Annex 17 on Security ;

(*n*) Dangerous Goods Manual which should also be in accordance with ICAO Annex on Dangerous Goods, ICAO Doc 9284 (Technical Instructions For The Safe Transportation of Dangerous Goods by Air) and Part 15 of these Regulations ;

(*iv*) The applicant may be required to provide additional documents and information depending on the type(s) of services(s) it intends to provide ;

(*v*) The Authority upon receipt of these documents and evaluation of same shall :

(*a*) Invite the promoters or directors of the company to a meeting with the officials of the Authority ;

(*b*) Seek the comments of the airport operator or owner on the proposed operation ;

D. *Qualification Stage*

An applicant shall be qualified for this stage if :

(*i*) Security Clearance has been obtained ;

(*ii*) favourable comments are received from the airport operator or owner about the proposed operation ; and

(*iii*) The Authority is convinced that the applicant has the potential to carry out the business.

E. *Issuance of Provisional Approval*

If the Authority is satisfied that the applicant has fulfilled the requirements, the Authority shall issue a provisional approval, and request the applicant to acquire the necessary equipment and demonstrate its capability to carry out efficient services.

F. *Demonstration*

The applicant will be required to demonstrate its ability to offer efficient services as contained in its operational manual.

G. *Issuance of a Licence*

A substantive licence shall be granted to the applicant by the Authority, upon satisfaction that the applicant has demonstrated its ability to offer safe, secure and efficient services.

H. *Validity of Licence*

(*i*) The validity of a licence shall be for Ten (10) years.

(*ii*) Upon receipt of licence, an annual utilization fee shall be paid to the Authority as stipulated in the NCAA schedule.

IS:18.9.1.2(*i*)(*b*).—A. *Renewal of Ground Handling Licence*

Requirements for the Renewal of a Ground Handling Licence.

(*i*) Application for renewal of Ground Handling Licence shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant ; and

(*iii*) The application Shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the expiration of the existing ground handling licence.

B. *Requirements*

The application for the renewal of a ground handling licence shall be accompanied with the following supporting documents :

(*i*) NCAA Receipt of payment of non-refundable renewal processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*ii*) Completed processing forms ;

(*iii*) Copies of tax clearance certificates of the company and of each of the directors for the last three (3) years ;

(*iv*) Current insurance policy ;

(*v*) List of any new key personnel (including the safety and security managers) with details of their qualifications, skills, experience etc. Copies of their curriculum vitae should be provided ;

(*vi*) Updated operational manual containing the company's Standard Operating Procedure on the services being provided ;

(*vii*) Copy of any new Service Level Agreements (SLAs) with the airlines ;

(*viii*) Applicant's updated manual on Safety Management System (SMS) ;

(*ix*) Applicant's updated Security Manual which shall be in compliance with the National Civil Aviation Security Programme (NCASP) and in accordance with the ICAO Annex 9 on Facilitation and Annex 17 on Security ; and

(*x*) Updated Dangerous Goods Manual which should also be in accordance with ICAO Annex on Dangerous Goods, ICAO Doc 9284 (Technical Instructions For The Safe Transportation of Dangerous Goods by Air) and Part 15 of these Regulations.

C. *Security Clearance*

The Authority shall during the course of processing the application, forward relevant documents to the Ministry of Aviation to enable it seek on behalf of the applicant, security clearance, from the Presidency.

The shareholders of the company will be required to appear at the Headquarters of the State Security Services in Abuja for documentation.

D. *Renewal of Licence*

(*i*) Upon satisfactory fulfillment of the requirements for renewal, the expired ground handling licence shall be renewed for ten (10) years ;

(*ii*) Upon receipt of the licence, , an annual utilization fee shall be paid to the Authority as stipulated in the NCAA Fees Schedule ; and

(*iii*) If on the date of the expiration of the licence, an application for renewal is pending with the Authority, the expiring licence may continue in force under such terms and conditions as prescribed by the Authority. This provision shall only apply if all the required documents for renewal of the licence have been submitted to the Authority and the delay in the renewal of the licence is occasioned by a third party.

Requirements for The Registration of Agents of Foreign Airlines.

IS:18.9.1.2.(*ii*)(*a*).—A. *Procedure for Application*

(*i*) Application for the registration as an agent of foreign airlines shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA) ;

(*ii*) The application shall be signed by a person duly authorized by the applicant ; and

(*iii*) The application Shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months prior to the date for the commencement of operations.

B. *Requirements*

(*a*) Payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*b*) The following documents shall be submitted along with the application :

(*i*) Copy of certified true copy certificate of incorporation ;

(*ii*) Copy of certified true copy of memorandum and articles of association with minimum share capital of one million Naira (₦1,000,000.00) ;

(*iii*) Curricula vitae of the directors and operations staff ;

(*iv*) Certificate(s) (if any) obtained by directors in aviation related courses ;

(*v*) Evidence of agency agreement with foreign airline(s), if any ;

(*vi*) Current tax clearance certificates of the company and of each of the directors (originals should be submitted for sighting) ;

(*vii*) Evidence of publication in respect of the application for registration in two (2) national daily newspapers (format attached) ;

(*viii*) Corporate profile, including other aviation-related services being performed by the applicant.

C. *Additional Requirements*

(*i*) The Authority shall inspect the office premises of the company at the applicant's cost. In case there is a change of address, the applicant shall notify the Authority immediately.

(*ii*) The applicant's operations staff shall show evidence of relevant certificates, experience, adequate knowledge and background in aviation-related matters.

D. *Validity of Certificate*

The validity of a certificate shall be two (2) years unless otherwise suspended, withdrawn or revoked.

Requirements for the Renewal of Certificate of Registration of Agents of Foreign Airlines.

IS:18.9.1.2(*ii*)(*b*).—A. *Procedure for Application*

(*i*) Application for renewal of an agent of foreign airlines shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application Shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the expiration of the existing registration.

B. *Requirement*

The following supporting documents shall be forwarded with the application :

(*a*) Returns on agent's activities in the past two (2) years, detailing amongst others, the number of flight clearances obtained and for which airlines, etc ;

(*b*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*c*) Details of relevant refresher courses attended by the operations staff during the period. (The certificates obtained should be attached) ;

(*d*) Curricula vitae of any new director and or operations staff ;

(*e*) Evidence of any new agency agreement with foreign airline(s) if any ; and

(*f*) Duly completed renewal form NCAA/AFA.001 (Form obtainable from the Authority).

C. Upon satisfactory fulfillment of the requirements for renewal, the expired certificate shall be renewed for two (2) years.

Requirements for Registration of Travel Agency.

IS:18.9.1.2.(*iii*)—A. *Procedure for Application*

(*i*) Application for the registration as a travel agency shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application Shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to prior to the date for the commencement of operations.

B. *Requirements*

(*i*) payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule.

(*ii*) The application must contain the following documents :

(*a*) Name and address of applicant ;

(*b*) Types of services being offered ;

(*c*) Number of offices owned by the applicant/company.

(*iii*) The following supporting documents must be submitted to the Authority before commencing the processing of the application :

(*a*) Copy of certified true copy of certificate of incorporation of company ;

(*b*) Copy of certified true copy of memorandum and articles of association of the company with minimum share capital of one million Naira (₦1,000,000.00) ;

(*c*) Curricula vitae of the Directors ;

(*d*) Evidence of registration by IATA ;

(*e*) Evidence of agency appointment by airlines (if any) ;

(*f*) Evidence of National Association of Nigerian Travel Agents (NANTA) membership ;

(*g*) Corporate profile in respect of all aviation related services being performed by the applicant ;

(*h*) Duly completed application form ; and

(*i*) Copy of receipt of payment of the non-refundable fee of Ten Thousand Naira (₦10,000.00) to the Authority ;

(*j*) Details of agency's performance in the default insurance programme.

C. *Additional Requirements*

(*i*) Each applicant shall make available its office premises for inspection by officials of the Authority at the applicant's cost.

(*ii*) Applicant must have at least two (2) full-time qualified personnel, who must have successfully completed a course in Airline Ticketing and Reservation in a recognized training institution. In addition, the personnel must have a minimum of two (2) years work experience with an IATA agency or airline in Ticketing/Reservation. No agency personnel will be deemed qualified, if he or she has not spent a minimum of ninety (90) days with the travel agency as at the time of inspection by the Authority.

D. Additional Information

(*i*) On receipt of an application, the Director-General may request for additional information from the applicant as may be deemed necessary.

(*ii*) Any duly registered or accredited agent should be aware that the Authority has the continuing responsibility to be satisfied with the conduct of the registered travel agent. The Authority shall monitor the activities of the travel agent to ensure that its operations are in accordance with set standards and regulations guiding the operation.

(*iii*) Notification to the Authority of change of name, location, ownership, shareholding in the company.

IS:18.9.1.2.(*iv*)(*a*).—A. *Procedure for Application*

Requirements for the Registration of Cargo Agents or Air Freight Forwarders.

(*i*) Application for registration as a cargo agent or air freight forwarder shall be made in writing to the Director-General.

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to prior to the date for the commencement of operations.

B. *Requirement*

(*i*) Copy of NCAA receipt of payment of the non-refundable fee to the Authority as stipulated in NCAA Fees Schedule ;

(*ii*) The application shall be submitted along with the following documents :

(*a*) Copy of certified true copy of certificate of incorporation of company

(*b*) Copy of certified true copy of memorandum and articles of association of the company ;

(*c*) Statement of Share Capital/Return of Allotment of Shares (Form CAC2) indicating a minimum authorized share capital of one million Naira (₦1,000,000.00) ;

(*d*) Curricula vitae of the Directors ;

(*e*) Evidence of agreement with the airline (if any) ;

(*f*) Evidence of membership of any relevant association(s) ;

(*g*) Corporate profile in respect of all aviation related services being performed by the applicant-company ;

(*h*) Current tax clearance certificates of company and directors of the company ; and

(*i*) Duly completed application form (form obtainable from the Authority).

C. *Additional Requirements*

(*i*) The Authority shall inspect the office and warehouse premises of the company at the applicant's cost. In case there is a change of address, the applicant shall notify the Authority immediately.

(*ii*) All personnel involved in cargo acceptance must be trained in Basic Cargo Skills and Procedures. The personnel should be competent to :

(*a*) calculate the transportation time ;

(*b*) calculate chargeable weight ;

(*c*) calculate relevant charges ;

(*d*) complete the air waybill (AWB) correctly ;

(*e*) have knowledge of conditions of carriage and airline liability ;

(*f*) have basic knowledge of relevant characteristics of aircraft ;

(*g*) make reference to and use relevant manuals ;

(*h*) have basic knowledge of handling Dangerous Goods.

(*iii*) The following additional requirements shall be fulfilled :

(*a*) The applicant must have at least two qualified personnel with certificates on Dangerous Goods Regulation (DGR) as appropriate (i.e. current within the validation period of 24 months).

(*b*) The applicant must submit a copy of its Dangerous Goods manual to the Authority for evaluation and approval.

(*c*) The applicant must have current copies of the ICAO Technical Instructions, (updated every 2 years).

(*d*) The applicant must ensure that shipments of dangerous goods are accepted and offered for transport in accordance with the, Part 15 of Nigeria Civil Aviation Regulation and ICAO Technical Instruction for the Transport of Dangerous Goods Doc 9284.

(*e*) The applicant shall have emergency response guide for all shipments.

Requirements for the Renewal of Registration of Cargo Agents or Air Freight Forwarders.

IS:18.9.1.2. (*iv*)(*b*).—A. *Procedure for Application*

(*i*) Application for renewal of a cargo agent or air freight forwarder shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application Shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to prior to the date for the expiration of the certificate.

B. *Requirement*

The following supporting documents shall be forwarded with the application :

(*i*) Returns on agent's activities in the past two (2) years, which may not be limited to the following :

(*a*) The tonnage of cargo processed, both imports and exports.

(*b*) Addresses of new Offices (if any).

(*ii*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule in respect of the application ;

(*iii*) Certificates of refresher courses attended by the operations staff during the period, especially in the handling of Dangerous Goods and special cargoes ; and

(*iv*) Curriculum vitae of any new directors of the company ;

(*v*) Evidence of agency agreement with airlines in case there have been changes to the previous agreement, or there are new ones ; and

(*vi*) Duly completed renewal form NCAA/CA.001 (Form obtainable from the Authority).

C. The facilities of the cargo shed shall be inspected by officers of the Authority prior to the renewal of the certificate.

D. Upon satisfactory fulfillment of the Requirements for Renewal, the expired certificate shall be renewed for two (2) years.

IS:18.9.1.2.(*v*).—A. *Procedure for Application*

Requirements for Registration of In-Flight Catering Companies.

(*i*) Application for licence as an in-flight catering company shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application shall be submitted to the Director-General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six(6) months to the desired commencement of operations.

B. *Requirements*

(*i*) The application for the registration of in-flight catering companies shall contain the following particulars :

(*a*) Name and address of applicant ;

(*b*) Areas of in-flight catering services to be provided ; and

(*c*) Proposed airport or airports where applicant intends to provide service.

(*ii*) The following supporting documents are required for processing of the application :

(*a*) Copy of certified true copy of certificate of incorporation of company ;

(*b*) Copy of certified true copy of memorandum and articles of association of the company ;

(*c*) Statement of Share Capital/Return of Allotment of Shares (Form CA2) indicating a minimum authorized share capital of Twenty-Five Million Naira (₦25,000,000.00) for domestic operations and Two Hundred Million Naira (₦200,000,000.00) for international operations ;

(*d*) Curriculum vitae of the directors and operations staff ;

(*e*) Current tax clearance certificates of the company and of each of the directors (originals should also be submitted for sighting) ;

(*f*) Details of adequate insurance policy (covering all areas of services to be provided) ;

(*g*) Evidence of registration of the company with the National Agency for Food and Drugs Administration and Control (NAFDAC) ;

(*h*) Evidence of publication of the application for registration in two national daily newspapers ;

(*i*) Company profile, including other aviation-related services being performed by the applicant if any ;

(*j*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*k*) Company exposition detailing the ownership and management structure, applicant's experience in the area of the proposed services it intends to provide, name and experience of technical partners (if any) etc ;

(*l*) Comprehensive details of technical partner including name, address, experience, nature of partnership arrangements, etc. Documentary evidence should be provided ;

(*m*) A copy of a detailed business plan on the operation indicating, among other things :

(*i*) Marketing analysis including market segments, target market and customers, etc ;

(*ii*) Competitive analysis such as industry overview, nature of competition, primary competitors, competitive products/ services, opportunities, threats and risks, etc ;

(*iii*) Marketing and Sales—These should address who the major customers will be and how they will be reached, marketing strategies to be used, etc. ;

(*iv*) Scope of applicant's operations giving comprehensive details of facilities and equipment required and their costs, management structure, staffing plan (employment plans, training and remuneration), operational procedure, etc ;

(*v*) List of key personnel (including the Quality Assurance, Safety and Security Managers) with details of their qualifications, skills, experience etc. Copies of their curriculum vitae should be provided ;

(*vi*) Financial plan including estimated costs of setting up the business, Projected revenue, scheme of charges, profit and loss projection, cash flow projection, balance sheet projection, etc (the assumptions used for the computations should also be stated).

(*n*) Operational Manual containing the company's proposed Standard Operating Procedures on the services to be rendered. This should contain details of how the operations will be conducted in accordance with international best practices. This should also contain a sample of the nature of the Service Level Agreements (SLAs) the applicant intends to have with airlines ;

(*o*) Applicant's Safety Management System (SMS) manual ;

(*p*) Applicant's Security Manual which shall be in compliance with the National Civil Aviation Security Programme (NCASP) and showing its understanding of the relevant provisions of ICAO Annexes such as Annex 9 on Facilitation and Annex 17 on Security ; and

(*q*) The applicant may be required to provide additional documents and information depending on the areas of service(s) it intends to provide.

C. *Additional Requirements*

(*i*) The office premises of the applicant shall be inspected by official(s) of the Authority at the applicant's cost.

(*ii*) The applicant's operational staff shall show evidence of relevant certificates and adequate knowledge relevant to the intended operation such as background in In-flight catering-related matters (chefs, microbiologists, quality control and janitors. etc.).

(*iii*) The applicant shall endeavour to organise refresher courses for its staff from time to time.

(*iv*) The applicant shall endeavour to establish offices at relevant airports.

(*v*) Duly completed Personal History Statement (PHS) forms and two (2) passport photographs in respect of each of the shareholders of the company having more than 5 percent equity shareholding to enable the NCAA seek security clearance from the Presidency on behalf of the applicant.

(*vi*) The applicant shall develop and implement an in-flight catering security programme in line with NCASP.

D. *Validity of Licence*

The validity of the Licence shall be for five (5) years.

Require-ments for the Registration of Aviation Fuel Suppliers.

IS:18.9.1.2.(*vi*).—*Procedure*

1. Application for Registration as an aviation fuel marketer shall be made in writing and addressed to the Director General, Nigerian Civil Aviation Authority (NCAA).

2. The application shall be signed by the lead promoter of the proposed business or Chief Operating/Executive Officer of the applicant company.

3. The application shall be submitted to the office of the Director General, Nigerian Civil Aviation Authority (NCAA) on or before a date not less than six (6) months to the intended date of commencement of operation.

A. *Requirements*

The application for Registration must contain the following initial particulars :

(*i*) Name and address of applicant ;

(*ii*) The airports/terminals where the fuel supplier operates or intends to operate ;

(*iii*) Name and full address(es) of the technical partner(s), with copy/ copies of the relevant agreement(s) ;

(*iv*) Evidence of Certification or Licence issued by the Department of Petroleum Resources (DPR) ;

(*v*) An applicant, having fulfilled other requirements, shall be required to obtain technical/quality approval from the Directorate of Airworthiness Standards (DAWS) and approval/attestation of adequate fire cover/protection from the Directorate of Airspace & Aerodrome Standards (DAAS) of NCAA, prior to registration ;

(*vi*) Evidence of Space Allocation in each airport of operation, issued by the Federal Airports Authority of Nigeria (FAAN).

B. The applicant is expected to fulfill the following requirements :

(*i*) Payment of Five Hundred Thousand Naira (₦500,000.00) non-refundable processing fee to the Authority (Bank draft made payable to the Authority) ;

(*ii*) Obtain and complete a processing form and return same to the Authority with evidence of payment of the ₦500,000.00 non-refundable processing fee ;

(*iii*) The processing form is required to be submitted along with the following documents, and conditions :

(*a*) DPR approvals and operational Licence ;

(*b*) FAAN approvals and evidence of land allocation for airfield storage ;

(*c*) Copy of Depot Agreement with FAAN ;

(*d*) Copy of Engineering Drawing ;

(*e*) Evidence of the required ground refueling insurance liability ;

(*f*) Evidence of operational safety case ;

(*g*) Provision of site-Specific Emergency Response ;

(*h*) Minimum global commencement bowser fleet of six (6) ;

(*i*) Importation Licence or evidence of throughput arrangement with a shore/coastal depot or evidence of ownership of coastal depots ;

(*j*) Evidence of possession of technically competent workforce (profession al competence and training records) ;

(*k*) Facilities layout plans for operational depot ;

(*l*) Standard and up-to-date operations manual ;

(*m*) Standard and up-to-date quality Control manuals ;

(*n*) Standard safety information guide for depots ;

(*o*) Stringent conditionality for facilities to design in-line with JIG recommendations for Filtration, Test Rig, spill containment, Fire fighting, oil water separation.

(*iv*) Submit the following documents :

(*a*) Certified true copy of the company's Certificate of Incorporation;

(*b*) A certified true copy of the company's Memorandum and Article of Association ;

(*c*) Statement of share capital/return of allotment of shares (form CAC 2) indicating minimum authorized share capital of not less than One Hundred Million Naira (₦100,000,000.00) ;

(*d*) Ownership structure and list of Directors of the company ;

(*e*) Copies of tax clearance certificates of the company and each of the directors for the last three (3) years ;

(*f*) Evidence of source of financing the business (Financial capability to undertake the business) ;

(*g*) Evidence or statement of insurance policy to cover the business indicating not less than the liability specified by the Authority, or Tarbox insurance cover ;

(*h*) Feasibility study report detailing the proposed operations plans for each of the intended airports ;

(*i*) List of key personnel responsible for the Aviation Fuel Supply services of the company; and in respect of each of the airports served by the company, with evidence of their relevant background(s), e.g training certificates, licences, curricula vitae etc. ;

(*j*) Curricula vitae and evidence of relevant background(s) of each of the Directors (e.g. training certificates, licences) ;

(*k*) The operations facility/installations of the applicant shall be inspected by officers of NCAA (DAWS, DAAS, DATR), prior to issuance of the Licence. Subsequently, regular monitoring and inspections shall be carried out on the company's facilities.

C. *Issuance of Certificate*

Upon satisfaction that the applicant has demonstrated the ability to render safe and efficient service, the Authority will issue to the applicant a Certificate of Registration.

D. *Validity of Certificate*

(*i*) The validity of the Certificate shall be for Five (5) years ;

(*ii*) Upon receipt of the Certificate of Registration, utilization fee of Two Hundred and Fifty Thousand Naira (₦250,000.00) only shall be paid to the Authority annually.

Requirements for Registration of Air Transport Training Institution.

IS:18.9.1.2. (*vii*).—A. *Procedure for Application*

(*i*) Application for registration as an Air Transport Training Institution shall be made in writing to the Director-General, Nigerian Civil Aviation Authority (NCAA).

(*ii*) The application shall be signed by a person duly authorized by the applicant.

(*iii*) The application shall be made to the Director-General on or before a date not less than six(6) months to the desired commencement of operations.

B. *Requirements*

(*i*) The application for the registration of Air Transport Training Institution shall contain the following particulars :

(*a*) Name and address of applicant ;

(*b*) Areas of courses to be provided ; and

(*c*) Proposed training sites where applicant intends to provide service.

(*ii*) The following supporting documents are required for processing of the application :

(*a*) NCAA Receipt of payment of non-refundable processing fee to the Authority as stipulated in NCAA Fees Schedule ;

(*b*) Completed application form ;

(*c*) Certified true copy of certificate of incorporation of company ;

(*d*) Certified true copy of memorandum and articles of association of the company ;

(*e*) Certified true copy of form C07 ;

(*f*) Proposed outline of courses the applicant intends to run and information and qualifications of lecturer(s) to undertake the proposed courses.

IS:18.13.2A.—STATISTICAL DATA REPORTING FORMS.

	Forms to be completed by Airlines (Scheduled) and Service Providers (FAAN and NAMA)	*Frequency of Submission*
(*i*)	Form A : Traffic-Commercial Air Carriers	Monthly
(*ii*)	Form A-S : Traffic-Commercial Air Carriers	Yearly
(*iii*)	Form B : On-Flight Origin and Destination	Quarterly
(*iv*)	Form C : Traffic by Flight Stage	Yearly
(*v*)	Form D : Airline's Fleet and Personnel	Yearly
(*vi*)	Form EF : Airline's Financial Data	Yearly
(*vii*)	Form I : Airport Traffic	Quarterly
(*viii*)	Form J : Airport Financial Data	Yearly
(*ix*)	Form K : Air Nav. Services Financial Data	Yearly
(*x*)	Form L : En-route Services Traffic Statistics	Yearly
(*xi*)	Form ATS 01/1: NCAA International Operations Statistical Returns (Passenger)	Monthly
(*xii*)	Form M : Fuel Consumption and Traffic-International and Total Services, Commercial Air Carrier	Yearly
(*xiii*)	Form ATS 01/2 : NCAA International Operations Statistical Returns (Cargo)	Monthly
(*xiv*)	Form ATS 02 : NCAA Airline Monthly Operations Returns Monthly	Monthly

IS:18.13.2B.—STATISTICAL DATA REPORTING FORMS.

	Forms to be completed by Airlines (Non-Schedule)	*Frequency of Submission*
(*i*)	Form A : Traffic-Commercial Air Carriers	Monthly
(*ii*)	Form D : Fleet and Personnel	Yearly
(*iii*)	Form EF : Financial Data	Yearly
(*iv*)	Form M : Fuel Consumption and Traffic- International and Total Services, Commercial Air Carrier	Yearly
(*v*)	Form ATS 02 : NCAA Airline Monthly Operations Returns	Monthly

IS:18.13.2C.—STATISTICAL DATA REPORTING FORMS.

Forms to be completed by Foreign Airlines	*Frequency of Submission*
(*i*) Form ATS 01/1 : NCAA International Operations Statistical Returns (Passenger)	Monthly

Contents of Tariffs.

IS:18.14.1.1. Every tariff shall contain :

(*a*) the name of the issuing air carrier and the name, title and full address of the officer or agent issuing the tariff ;

(*b*) the tariff number, and the title that describes the tariff contents ;

(*c*) the dates of publication, coming into effect and expiration of the tariff, if it is to expire on a specific date ;

(*d*) a description of the points or areas from and to which or between which the tariff applies ;

(*e*) in the case of a joint tariff, a list of all participating air carriers ;

(*f*) a table of contents showing the exact location where information under general headings is to be found ;

(*g*) an index of points from, to or between which rates apply ;

(*h*) a list of the airports, aerodromes or other facilities used with respect to each point shown in the tariff ;

(*i*) where applicable, information regarding prepayment requirements and restrictions and information regarding non-acceptance and non-delivery of cargo, unless reference is given to another tariff number in which that information is contained ;

(*j*) a full explanation of all abbreviations, acronyms, notes, reference marks, symbols and technical terms used in the tariff and, where a reference mark or symbol is used on a page, an explanation of it on that page or a reference thereon to the page on which the explanation is given ;

(*k*) the terms and conditions governing the tariff, generally, stated in such a way that it is clear as to how the terms and conditions apply to the rates named in the tariff ;

(*l*) any special terms and conditions that apply to a particular rate and, where the rate appears on a page, a reference on that page to the page on which those terms and conditions appear ;

(*m*) the terms and conditions of carriage, clearly stating the air carrier's policy in respect of at least the following matters, namely :

(*i*) the carriage of persons with disabilities,

(*ii*) acceptance of children,

(*iii*) passenger re-routing,

(*iv*) failure to operate the service or failure to operate on schedule,

(*v*) refunds for services purchased but not used, whether in whole or in part, either as a result of the client's unwillingness or inability to continue or the air carrier's inability to provide the service for any reason,

(*vi*) ticket reservation, cancellation, confirmation, validity and loss,

(*vii*) refusal to transport passengers or cargo,

(*viii*) method of calculation of charges not specifically set out in the tariff,

(*ix*) limits of liability regarding passengers and cargo,

(*x*) exclusions from liability respecting passengers and cargo, and

(*xi*) procedures to be followed, and time limitations, for making claims ;

(*n*) the rates, shown in Nigerian currency, together with the names of the points from, to or between which the fares apply, arranged in a simple and systematic manner, clearly identified ;

(*o*) the routings related to the rates unless reference is made in the tariff to another tariff in which the routings appear ; and

(*p*) the official descriptive title of each type of passenger fare, together with any name or abbreviation thereof.

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B 2592

NIGERIA CIVIL AVIATION REGULATIONS

PART 19—CONSUMER PROTECTION REGULATIONS

INTRODUCTION

Part 19 deals with Passengers' Rights and Responsibilities andAirlines' Obligations to Passengers. This Part addresses consumer protection issues, including, compensations for denied boarding, delays and cancellations of flights.

B 2594

NIGERIA CIVIL AVIATION REGULATIONS

PART 19—CONSUMER PROTECTION REGULATIONS

ARRANGEMENT OF REGULATIONS

Regulations

B 2596

S.I. No. 36 of 2015

NIGERIA CIVIL AVIATION REGULATIONS

PART 19—PASSENGERS' RIGHTS AND RESPONSIBILITIES AND AIRLINES' OBLIGATIONS

19.1. Applicability

19.1.1. This Part prescribes minimum rights and responsibilities of passengers and airlines' obligations to passengers, where :

(*a*) There is an incidence of Overbooking and passengers are denied boarding against their will ;

(*b*) A scheduled flight is delayed ;

(*c*) A scheduled flight is cancelled ; and

(*d*) Passengers fail to discharge their responsibilities.

19.1.2. Definitions

19.1.2.1. For the purpose of this part, the following definitions shall apply:

(1) "*Aircraft*" means any machine that can derive support in the atmosphere from reactions of the air other than reactions of the air against the earth surface.

(2) " *Air Carrier*" means an enterprise that engages in provision of transportation services by aircraft for remuneration or hire.

(3) "*Airline*" means any air transport enterprise offering or operating a scheduled international air service.

Note : Nothwithstanding the definitions in (2) & (3) above, for the purpose of this part, the words 'Air Carrier' and 'Airline' are used interchangeably.

(4) "*Assessment*" means an initial evaluation of a complaint by the Authority to determine the appropriate means of redress.

(5) "*Authority*" means the Nigerian Civil Aviation Authority.

(6) "*Consumer*" means consumer of civil aviation services.

(7) "*Baggage*" means personal property of passengers or crew carried on an aircraft by agreement with the operator.

(8) "*Cancellation*" means the non-operation of a flight which was previously planned and on which at least one seat was reserved.

(9) "*Cargo*" which is an equivalent to the term "goods" means anything carried or to be carried in an aircraft or by means of surface transportation including, but not limited to, road or rail vehicles, except mail, or baggage carried under a passenger ticket and baggage check, but includes baggage moving under an Air Waybill or shipment Record.

(10) "*Compensation*" means direct and/or indirect monetary and/or non-monetary benefits offered to passengers whose rights have been infringed upon.

(11) "*Complainant*" means :

(*i*) An air passenger ;

(*ii*) One or more air passengers, where there are numerous air passengers having the same interest ; or

(*iii*) In case of the death of an air passenger, his legal heirs or representatives making or continuing a complaint.

(12) "*Complaint*" means an allegation in writing made by an air passenger, a group of passengers or their legal heirs or representatives.

(13) "*Confirmed Reserved Space*" means space on a specific date and on a specific flight and class of service on an air carrier which has been requested by a passenger, including a passenger with a zero fare ticket", and which the air carrier or its agent has verified, by appropriate notation on the ticket or in any other manner provided therefore by the air carrier, as being reserved for the accommodation of the passenger.

(14) "*Denied Boarding*"means a refusal by an airline to carry passengers who hold confirmed reservation and valid travel documentation, although they have presented themselves for check-in and/or boarding at the time stipulated by the airline , on grounds of oversold service.

(15) "*Disembarkation*" means the leaving of an aircraft after landing, except by crew or passenger continuing on the next stage of the same through-flight.

(16) "*Embarkation*" means the boarding of an aircraft for the purpose of commencing a flight, except by such crew or passengers as have embarked on a previous stage of the same through-flight.

(17) "*Extra Ordinary Circumstances*" means any mechanical, technical, operational, climatic, socio-political or any other conditions beyond the actual control of the party involved.

(18) "*Fare*": means the price paid for air transportation including all mandatory taxes and fees. It does not include ancillary fees for optional services.

(19) "*Foreign Aircraft*" means an aircraft other than a Nigerian registered aircraft.

(20) "*International Airport*" means any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

(21) "*Liability*" means debt of the entity in the form of financial claims on entities assets.

(22) "*Mishandled baggage*" means baggage involuntarily, or inadvertently, separated from passenger or crew.

(23) "*Passenger*" means a person in whose name a ticket and a reservation is made and or confirmed and who is eligible to travel upon the stated flight pursuant to that ticket whether the ticket is purchased by the person or not and whether the ticket is zero fare ticket for which no fees or fare is paid.

(24) "*Person*" means any individual, firm, partnership, corporation, company, association, joint state association or body politic and includes and trustee, receiver, assignee, or other similar representative of the entities.

(25) " *Person with Disabilities*" means any person whose mobility is reduced due to sensory or locomotory incapability, an intellectual deficiency, age, illness, or any other cause of disability and whose situation needs special attention and the adaptation to the person's needs of the services made available to all passengers.

(26) "*Ticket*" means a valid document giving entitlement to transport, or something equivalent in paperless form, including electronic form, issued or authorized by the air carrier or its authorized agent.

(27) "*Tour Operator*" means, with the exception of an air carrier, an organizer of package travel, package holidays and package tours.

(28) "*Unaccompanied Baggage*" means baggage that is transported as cargo and may or may not be carried on the same aircraft with the person to whom it belongs.

(29) "*Unclaimed Baggage*" means baggage that arrives at an airport and is not picked up or claimed by a passenger.

(30) "*Volunteer*" means a person who responds to the carrier's request for volunteers and who willingly accepts the carriers' offer of compensatory benefits, in exchange for relinquishing the confirmed reserved seat..

19.2. Scope of Application.

19.2.1. This Part shall apply :

(*i*) to passengers departing from an airport located within the Nigerian territory to another airport within Nigeria ;

(*ii*) to passengers departing from an airport located in another country to an airport situated within Nigeria, unless they received benefits or compensation and were given assistance in that other country ;

(*iii*) to passengers on foreign air transportation with respect to flight segments originating at a point within Nigeria.

19.2.2. In respect of section19.2.1. of this Part , it shall apply to passengers on scheduled flights including packaged tours, and on the condition that a passenger :

(*i*) has a confirmed reservation on the flight concerned and, except in the case of cancellation referred to in section 19.7, presents himself or herself for check-in, as stipulated and at the time indicated in advance and in writing (including by electronic means) by the air carrier, tour operator or an authorized travel agent, or, if no time is indicated, not later than two (2) hours before the published departure time ; or

(*ii*) has been transferred by an air carrier or tour operator from the flight for which he or she held a reservation to another flight, irrespective of the reason.

19.2.3. This Part shall not apply to passengers travelling free of charge or at a reduced fare not available directly or indirectly to the public. However, it shall apply to passengers having tickets issued under a frequent flyer programme or other commercial programme by an air carrier or tour operator.

19.2.4. This Part shall apply to any operating air carrier providing transport to passengers covered in Part 19.2.1. and 19.2.2. above. Where an operating air carrier, which has no contract with the passenger, performs obligations under these Regulations, it shall be regarded as doing so on behalf of the carrier having a contract with that passenger.

19.2.5.This Part shall not apply in cases where a packaged tour is cancelled for reasons other than cancellation of the flight.

19.3. "NO SHOW" AND OVERBOOKING.

19.3.1. A passenger who shows-up on a later date or time other than the scheduled date or time of departure on his or her ticket may be considered for wait-listing on another flight subject to seat availability after meeting the airlines' requirement(s).

19.3.2. An air carrier may overbook a scheduled flight in contemplation of the possibility of some passengers not showing up for that flight.

19.4. DENIED BOARDING

19.4.1. An airline shall have the following obligations in the event of an oversold flight:

(*i*) ensure that the smallest practicable number of persons holding confirmed reserved seat on that flight are denied boarding involuntarily;

(*ii*) request for volunteers for denied boarding before applying boarding priority.

19.4.2. Any other passengers denied boarding except in accordance with Section 19.4 above, is considered for purposes of this Regulation to have been denied boarding involuntarily, even if the passengers accept the denied boarding compensation. Volunteers shall be compensated in accordance with Sections 19.8 and 19.9. (Compensation Provision), such assistance being additional to the benefits mentioned in this paragraph.

19.4.3. In relation to each passenger solicited to volunteer for denied boarding, no later than the time the airline solicits that passenger to volunteer for denied boarding, the airline shall :

(*i*) advise whether he or she is in danger of being involuntarily denied boarding and, if so, the compensation the carrier is obligated to pay if the passenger is involuntarily denied boarding ;

(*ii*) disclose all material restrictions, including but not limited to administrative fees, advance purchase or capacity restrictions, and blackout dates applicable to the offer before the passenger decides whether to give up his or her confirmed reserved space on that flight in exchange for the free or reduced rate transportation.

19.4.4. If an insufficient number of volunteers come forward, the carrier may deny boarding to other passengers in accordance with its boarding priority procedures.

19.5. Boarding Priority Procedures

19.5.1. Every operating air carrier shall establish boarding priority procedures and criteria for determining which passengers holding confirmed reserved space shall be denied boarding on an oversold flight if an insufficient number of volunteers come forward. Such procedures and criteria shall reflect the obligations of the operating air carrier set forth in sections 19.4.1 and 19.4.2 to minimize involuntary denied boarding and to request for volunteers, and shall be written in such manner as to be understandable and meaningful to the average passenger. Such procedures and criteria shall not make, give, or cause any undue or unreasonable preference or advantage to any particular person or subject any particular person to any unjust or unreasonable prejudice or disadvantage in any respect whatsoever.

19.5.2. Boarding priority factors may include, but are not limited to, the following :

(*i*) passengers on urgent medical trips ;

(*ii*) a passenger's time of check-in ;

(*iii*) whether a passenger has a seat assignment prior to boarding ;

(*iv*) the fare paid by a passenger ;

(*v*) a passenger's frequent-flyer status ;

(*vi*) a passenger's reduced mobility status, including unaccompanied minors ;

(*vii*) Families (maximum of two adults) where at least one child is aged five years or under.

19.5.3. If an insufficient number of volunteers come forward to allow the remaining passengers with reservations to board the flight, the operating air carrier may then deny boarding to passengers involuntarily.

19.5.4. If boarding is denied to passengers involuntarily, the operating air carrier shall immediately compensate them in accordance with Sections 19.8 and 19.9; and assist them in accordance with Sections 19.10; 19.11 and 19.12.

19.5.5. Every air carrier shall develop and file with the Authority Boarding Priority Procedures consistent with these Regulations.

19.6. DELAY

19.6.1. DOMESTIC FLIGHTS.

19.6.1.1. For domestic flights, when an operating air carrier reasonably expects a flight to be delayed beyond its scheduled time of departure, it shall provide the passengers with reason(s) for the delay within 30 minutes after the scheduled departure time and the assistance specified below :

(*i*) after two hours, refreshments as specified in section 19.10.1(*i*) and telephone calls, SMS and E-mails as specified in section 19.10.2 ;

(*ii*) Beyond three (3) hours, Reimbursement as specified in Section 19.9.1(*i*) ; and

(*iii*) at a time beyond 10pm till 4am, or at a time when the airport is closed at the point of departure or final destination, the assistance specified in sections 19.10.1(iii)and 19.10.1(iv) (hotel accommodation and transport)

19.6.2. INTERNATIONAL FLIGHTS.

19.6.2.1. For international flights, when an operating air carrier reasonably expects a flight to be delayed beyond its scheduled time of departure, it shall provide to the passengers the assistance specified below :

(*i*) between two and four hours, compensation as specified in sections 19.8.1(*i*) and Telephone Calls, SMS, E-mails as specified in 19.10.2 ;

(*ii*) more than four hours, Meal as specified in 19.10.1(*ii*) and Telephone Calls, SMS, E-mails as specified in 19.10.2 ; and

(*iii*) when the reasonably expected time of departure is at least six hours after the time of departure previously announced, the Hotel accommodation assistance as specified in sections 19.10.1(*iii*) and Transport assistance as specified in 19.10.1(*iv*).

19.6.2.2. In any event, the assistance shall be provided within the time limits set out in these regulations.

19.7. CANCELLATION.

19.7.1. In case of cancellation of a flight, the passengers concerned shall :

(*i*) Be offered assistance by the operating air carrier in accordance with Sections 19.6. and ;

(*ii*) Be offered assistance by the operating air carrier in accordance with Sections19.9.1(i) and 19.9.2 as well as, in the event of re-routing when the reasonably expected time of departure of the new flight is at least the day after the departure as it was planned for the cancelled flight, the assistance specified in Sections 19.9.1(*ii*) and 19.9.1(*iii*) ;

(*iii*) In respect of domestic flights, have the right to compensation by the operating air carrier in accordance with Section 19.10 unless they are informed of the cancellation at least twenty-four hours before the scheduled time of departure ; and

(*iv*) In respect of international flights, have the right to compensation by the operating air carrier in accordance with Section 19.10, unless :

(*a*) they are informed of the cancellation at least seven days before the scheduled time of departure ;

(*b*) they are informed of the cancellation between three and seven days before the scheduled time of departure and are offered re-routing, allowing them to depart not more than two hours before the scheduled time of departure and to reach their final destination less than four hours after thescheduled time of arrival ; or

(*c*) they are informed of the cancellation less than seven days before the scheduled time of departure and are offered re-routing, allowing them to depart not more than one hour before the scheduled time of departure and to reach their final destination less than two hours after the scheduled time of arrival.

19.7.2. When passengers are informed of the cancellation, an explanation shall be given concerning possible alternative transport.

19.7.3. An operating airline shall not be obliged to pay compensation for cancellation if it can prove that the cancellation is caused by extraordinary circumstances which could not have been avoided even if all reasonable measures had been taken.

19.7.4. The burden of proof concerning any question as to whether and when the passenger has been informed of the cancellation of the flight shall rest with the operating airline.

19.8. RIGHT TO COMPENSATION.

19.8.1. Where reference to compensation is made in this section, passengers shall receive at least

(*i*) 25% of the fares or passenger ticket price for all flights within Nigeria.

(*ii*) 30% of the passenger ticket price for all international flights.

19.8.2. When passengers are offered re-routing to their final destination on an alternative flight pursuant to Section 19.10 the arrival time of which does not exceed the scheduled arrival time of the flight originally booked :

(*i*) by one hour, in respect of all domestic flights ;

(*ii*) by three hours, in respect of all international flights, the operating airline may reduce the compensation provided for in section 19.8.1.by 50%.

19.8.3. The compensation referred to in Section 19.9.1 shall be paid in cash, by electronic bank transfer, bank orders or bank cheques or, with the signed agreement of the passenger, in travel vouchers or other services.

19.8.4. Where compensation is made in voucher, the voucher shall be redeemable at all sales outlets of the air carrier providing the voucher.

19.9. RIGHT TO REIMBURSEMENT OR RE-ROUTING.

19.9.1. Where reference to reimbursement or re-routing is made in this section, passengers shall be provided any of the following choices :

(i) immediate reimbursement in cash for domestic flights and reimbursement within fourteen days for international flights, by the means provided for in sections 19.8.3(mode of payment), of the full cost of unutilized ticket at the price at which it was bought, for the part or parts of the journey not made, and for the part or parts already made if the flight is no longer serving any purpose in relation to the passenger's original travel plan, together with, when relevant, a return flight to the first point of departure, at the earliest opportunity ;

(*ii*) re-routing, under comparable transport conditions, to their final destination at the earliest opportunity ; or

(*iii*) re-routing, under comparable transport conditions, to their final destination at a later date at the passenger's convenience, subject to availability of seats.

19.9.2, Section 19.9.1(*i*)shall also apply to passengers whose flights form part of a package, except for the right to reimbursement where such right arises under any contractual understanding between the passenger and provider.

19.9.3. When an operating air carrier offers a passenger a flight to an airport alternative to that for which the booking was made, the operating air carrier shall bear the cost of transferring the passenger from that alternative airport either to the airport for which the booking was made, or to another close-by destination agreed with the passenger.

19.10. Right to Care.

19.10.1. Where reference to care is made in this section, passengers shall be offered free of charge :

(*i*) refreshments such as water, soft drinks, confectioneries / snacks ;

(*ii*) a meal ;

(*iii*) hotel accommodation ;

(*iv*) transport between the airport and place of accommodation (hotel or other accommodation).

19.10.2 In addition to section 19.10.1, passengers shall be offered free of charge, two telephone calls, SMS or emails.

19.10.3. In applying this section, the operating air carrier shall prioritize the needs of persons with reduced mobility and any persons accompanying them, as well as to the needs of unaccompanied minors.

19.11. Upgrading and Downgrading.

19.11.1. If an operating airline places a passenger in a class higher than that for which the ticket was purchased, it may not request any supplementary payment.

19.11.2. If an operating airline places a passenger in a class lower than that for which the ticket was purchased, by the means provided for in Section 19.8.3, it shall immediately reimburse the difference to the passenger in accordance with the mode of payment within 30 days from the date of travel, plus :

(*i*) 30% of the price of the ticket for all domestic flights immediately, and

(*ii*) 50% of the price of the ticket for all international flights within 14 days.

19.12. Persons with Reduced Mobility or Special Needs

19.12.1. Operating airline shall give priority to persons with reduced mobility and any persons accompanying them, unaccompanied minors, and families (maximum of two adults) where at least one child is aged five years or under.

19.12.2. In cases of denied boarding, cancellation and delays (as specified in Section 19.6) persons with reduced mobility and any persons accompanying them, unaccompanied minors, and families (maximum of two adults) where at least one child is aged five years or under, shall have the right to care in accordance with section 19.10.

19.13. FURTHER COMPENSATION.

19.13.1. This section shall apply without prejudice to a passenger's rights under any contract, statute or any other applicable law.

19.13.2. Without prejudice to relevant principles under any other law, including case law, section 19.20.1shall not apply to passengers who have voluntarily surrendered a reservation under section 19.4.1(*i*).

19.14. RIGHT OF REIMBURSMENT

19.14.1. In cases where an operating air carrier pays compensation or meets the other obligations incumbent on it under these Regulations, no provision of these Regulations may be interpreted as restricting its right to seek compensation from any person, including third parties, in accordance with any applicable law.

In particular, these Regulations shall in no way restrict the operating air carrier's right to seek reimbursement from a tour operator or any other person with whom the operating air carrier has a contract. Similarly, no provision of these Regulations may be interpreted as restricting the right of a tour operator or a third party, other than a passenger, with whom an operating airline has a contract, to seekreimbursement or compensation from the operating airline in accordance with applicable relevant laws.

19.15. Correction of misspelt names.

Passengers shall not pay any fee for corrections on misspelt names provided it is done 48 hours before the flight.

19.16. OBLIGATION TO INFORM PASSENGERS OF THEIR RIGHTS

19.16.1. The operating airline shall ensure that at check-in, a clearly legible notice containing the following text is displayed in a manner clearly visible to passengers: "If you are denied boarding or if your flight is cancelled or delayed for at least one hour, ask the airline officials for a written statement of your rights, particularly with regard to compensation and assistance.

19.16.2. An airline denying boarding or cancelling a flight shall provide each passenger affected with a written notice setting out the procedures for compensation and assistance in line with these Regulations. It shall also provide each passenger affected by a delay of at least one hour with an equivalent notice.

19.16.3. In respect of illiterate, visually impaired or other persons under disability, the provisions of this Regulation shall be applied using appropriate alternative means.

19.17. Right to Compensation for Delayed, Lost and Damaged Baggage

19.17.1. A passenger shall have the right to his/her baggage carried on the same flight that such passenger takes, subject to the considerations of safety, security, or any other legal and valid cause.

19.17.2. In case a checked-in baggage has been off-loaded for operational, safety, or security reasons, the air carrier shall inform the passenger at the soonest practicable time and in such manner that the passenger will readily know of the off-loading. If the passenger's baggage has been off-loaded, the air carrier should notify the passenger, even if it had already announced that the baggage would be on the next flight.

19.17.2.1 The air carrier shall carry the off-loaded baggage in the next flight with available space, and deliver the same to the passenger. The air carrier shall immediately tender an amount to the passenger, as compensation for the inconvenience the latter experienced as follows :

(*i*) For Domestic flights five thousand Naira (₦5,000) ;

(*ii*) For International flight One hundred and fifty USD ($150)

19.17.3. Should such baggage, whether carried on the same or a later flight, be lost or suffer any damage attributable to the air carrier, the passenger shall be compensated in accordance with the provisions of the Nigeria Civil Aviation Act.

19.17.3.1. For compensation purposes, a passenger's baggage is presumed to have been permanently and totally lost, if within a period of 7 (seven) days for domestic flights and 21(twenty-one) days, for International flights, counted from the time the passenger or consignee should have received same, the baggage is not delivered to the said passenger or consignee.

19.17.4. Refund of checked baggage fees will also apply, if the baggage is not delivered to the passenger within twenty-four (24) hours from the arrival of flight.

19.18. Exclusion of Waiver.

19.18.1. Airlines' obligations to passengers under these Regulations shall not be limited or waived, notably by a derogation or restrictive clause in the contract of carriage.

19.18.2. If such a derogation or restrictive clause is applied in respect of a passenger, or if the passenger is not correctly informed of his rights and for that reason has accepted compensation which is inferior to that provided for in these Regulations, the passenger shall still be entitled to pursue any available remedies.

19.19. Misleading Advertising.

19.19.1. The Authority shall deem as misleading any advertising or solicitation by an air carrier, tour operator, or an agent of either, for passenger air transportation, a package, or a package component that states a price for such air transportation, package, or package component to be an unfair or deceptive practice, unless the price stated is the entire price to be paid by the passenger to the air carrier, tour operator or agent, for such air transportation, package, or package component

19.19.2. Every passenger shall, before purchasing any ticket for a contract of carriage by the air carrier or its agents, be entitled to the full, fair, and clear disclosure of all the terms and conditions of the carriage about to be purchased. The disclosure shall include, among others, documents required to be presented at check-in, provisions on check-in deadlines, refund and rebooking policies, and procedures and responsibility for delayed and/or cancelled flights. These terms and conditions may include liability limitations, claim-filing deadlines and other crucial conditions.

19.19.3. Every airline shall file all adverts and promotions with the Authority.

19.19.4 No airline, tour operator, or an agent of either shall charge or collect any additional fare (whether taxes, commissions, brokerage fees, administrative charges, or any other fees) from passengers not expressly displayed and described in the marketing material or advertisement.

19.19.5. No airline shall display deceitful departure time at its counter.

19.20. Complaints.

A passenger may lodge a complaint with the Consumer Protection Directorate, or any other competent person designated by the Authority, about an alleged infringement of this Part .

19.21. Provision of Information.

19.21.1**.** When requested to provide information by the Authority for the purposes of enforcing this Part, an operating airline shall provide such information as the Authority may specify.

19.21.2. Any information generated by an operating airlinein relation to Section 19.20.-1, shall be retained by the airline for a period of not less than two years.

19.22. Complaints Procedure.

19.22.1. Every airline shall have a designated officer for the purpose of receiving and resolving complaints from its passengers. Such designated officers may liaise with the Authority where necessary.

19.22.2. Every airline shall submit to the Authority its consumer complaint procedure manual which shall be in accordance with its business module.

19.22.3. APassenger may make a complaint with the Authority against an airline in relation to the breach of air passenger rights as provided in the Regulations by filling and submitting a Complaint Form (available online and at all airports), after the consumer must have notified the air carrier of such a breach and the complaint remains unresolved.

19.22.4. A complaint shall be made in writing or electronically and transmitted to the Authority.

19.22.5 Every complaint shall be accompanied by :

(*i*) a copy of the airline ticket (where applicable) ;

(*ii*) A copy of the letter to the air carrier stating a claim for breach of air passenger rights ;

(*iii*) any response or responses or correspondence thereto ;

(*iv*) Any other relevant document(s).

19.22.6. Where a complaint has been made in a representative capacity, the representative shall provide the complainant's written authority to act on his or her behalf.

19.22.7. Complainants may present a class action before the Authority, but must appoint a representative for the class.

19.23. Assessment.

19.23.1. The Authority shall cause an investigation to be carried out on the substance of the complaint and the consideration given by the air carrier within a reasonable period of time after the receipt thereof.

19.23.2. In carrying out any assessment under these Regulations, an officer designated by the Authority shall have all the powers of investigation stipulated in Section 30(4)(*i*) of the Civil Aviation Act 2006, and in addition may request for submissions to be made by any interested person(s) in relation to a complaint.

19.23.3. The Authority shall amongst other things :

(*i*) Notify the Respondent that a request has been lodged under these regulations ;

(*ii*) Require the Respondent to respond to the complaint within 7 days ;

(*iii*) Require the Respondent to describe the procedure it has taken to resolve the matter.

19.24. DETERMINATION OF COMPLAINTS.

19.24.1. After every assessment, the investigator shall make an assessment report and shall make recommendations therein.

19.24.2. Upon a consideration of the assessment report, the nature of the conduct alleged against the Respondent, the extent of the claim by the complainant, public interest and other relevant factors, the Authority shall make a determination in any of the following ways :

(*i*) the complaint lacks merit pursuant to which the complaint would be struck out ;

(*ii*) the complaint is of such a nature as to advise the parties to resolve the dispute through mediation ;

(*iii*) the complaint is of such a nature as to be subjected to the Authority's administrative hearing procedure set out in Section 19.-25.

(*iv*) take any other such actions as the Authority may deem necessary.

19.24,3. The Authority shall give notice of its determination to the interested parties.

19.25. Administrative Hearing Procedure.

19.25.1. In the event that the interested parties do not agree to submit to the mediation procedure, the complaint shall be subject to the Administrative Hearing Procedure of the Authority.

19.25.2. If the Authority is of the view that the matter raised in the complaint are those over which any provision of the Act applies, the Authority shall set the complaint for Administrative Hearing.

19.25.3. The Authority shall serve the parties a notice requesting a statement in support of their claim or case together with any evidence in support thereof.

19.25.4. The Complainant shall within 7 days of the receipt of the notice transmit a statement of his case in writing to the Authority and the Respondent together with any evidence to be relied upon.

19.25.5. The Respondent shall within 7 days of the receipt of the Statement of the case of the Complainant, transmit a statement of his case together with any evidence to be relied upon to the Authority and the Complainant.

19.25.6. The Authority shall fix a date for the hearing and shall so inform the complainant and the Respondent.

19.25.7. At every hearing fixed pursuant to these Regulations :

(*i*) the person who made the complaint, or in whose behalf it was made, and each person to whom a notice was sent and any other person whose presence at the hearing is considered by the Authority to be desirable, is entitled to attend and participate personally or, in the case of a company or a firm, berepresented by a person who, or by persons each of whom, is a director, officer, or employee of the company or firm ; and

(*ii*) a person participating in the hearing in accordance with paragraph (*i*) above is entitled to have another person, who may be a legal practitioner, or other persons present to assist him.

19.25.8. At every hearing, the Authority shall provide for as little formality and technicality as the requirements of the Act and a proper consideration of the complaint may permit.

(*i*) Where the complainant fails to appear before the Authority on the date of hearing, the Authority may recommend that the complaint be dismissed for default, or decide it on merit.

(ii) Where the Respondent fails to appear before the Authority on the date of hearing, the Authority would make recommendations based on the available records.

19.25.9. The Authority shall cause such records of the hearing to be made as is sufficient to set out the matters raised by the persons participating in the hearing.

19.25.10. Every complaint shall be heard as expeditiously as possible and a determination made thereon within a reasonable time after the termination of the hearing.

19.25.11. (*i*) No adjournment of hearing shall be granted by the Authority unless sufficient cause is shown and the reasons for grant of adjournment has been recorded in writing by the Authority ;

(*ii*) The Authority may make such a decision as to the cost for the adjournment as may be considered appropriate.

19.25.12. The Authority may terminate the hearing after it is satisfied that every person participating in the hearing has been given a reasonable opportunity to state or explain his or its position.

19.25.13. (*i*) Where the Authority is of the opinion that no provision of the Act, or any Regulations made there under has been violated by the person against whom the complaint was made, the Authority shall make a determination to that effect.

(*ii*) Where the Authority is of the opinion that any provision of the Act, or any Regulations made there under has been violated, the Authority shall make a determination to that effect and make recommendations as it deems fit and reasonable to ensure that the violation ceases and that the injured party is accorded a reasonable remedy for his injury.

19.25.14. The Authority shall on the basis of any recommendations made pursuant to the hearing, issue a directive which may relate to :

(*i*) the payment of compensation or restitution to a complainant ;

(*ii*) the payment of fines and/or penalties ;

(*iii*) the referral of any persons for criminal prosecution ; or

(*iv*) any other directive that may grant redress to a complainant.

19.25.15. Every directive of the Authority shall be complied with within 30 days of it being issued.

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NIGERIA CIVIL AVIATION REGULATIONS

PART 20— SAFETY MANAGEMENT

INTRODUCTION

Part 20 of the Nigeria Civil Aviation Regulations addresses the Safety Managementre quirements and meets the standards contained in ICAO *Annex* 19.

ICAO *Annex* 19 consolidates material from existing Annexes regarding SSP and safety management systems (SMSs), as well as related elements including the collection and use of safety data and State safety oversight activities.

NIGERIA CIVIL AVIATION REGULATIONS

PART 20— SAFETY MANAGEMENT

ARRANGEMENT OF CONTENT

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6. Responsibility of the custodian of safety information.
7. Protection of recorded information.

NIGERIA CIVIL AVIATION REGULATIONS

PART 20— SAFETY MANAGEMENT

20.1. GENERAL

20.1.1.1.—(*a*) Part 20 of these Regulations shall be applicable in Nigeria to safety management functions related to, or in direct support of, the safe operation of aircraft. Applicability.

20.1.1.2.**—**(*a*) For the purpose of Part 20 of these Regulations, the following definitions shall apply : Definitions.

(1) *Accident*.— An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes placebetween the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with thepurpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which :

(*i*) a person is fatally or seriously injured as a result of :

(*A*) being in the aircraft, or

(*B*) direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or

(*C*) direct exposure to jet blast,except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries areto stowaways hiding outside the areas normally available to the passengers and crew ; or

(*ii*) the aircraft sustains damage or structural failure which :

(*A*) adversely affects the structural strength, performance or flight characteristics of the aircraft, and

(*A*) would normally require major repair or replacement of the affected component,except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings oraccessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing geardoors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotorblades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome) ; or C)

(*iii*) the aircraft is missing or is completely inaccessible.

Note 1.— *For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident isclassified, by ICAO, as a fatal injury.*

Note 2.—*An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.*

Note 3.—*The type of unmanned aircraft system to be investigated is addressed in 5.1 of Annex 13.*

Note 4.—*Guidance for the determination of aircraft damage can be found in Attachment F of Annex 13.*

(2) *Aeroplane*.—A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaceswhich remain fixed under given conditions of flight.

(3) *Aircraft*.—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of theair against the earth's surface.

(4) *Helicopter*.—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

Note.—Some States use the term "rotorcraft" as an alternative to "helicopter".

(5) *Incident*.—An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Note.—The types of incidents which are of interest for safety-related studies include the incidents listed in Annex 13, Attachment C.

(6) *Industry codes of practice*.—Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organization's Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate.

Note.—Some States accept and reference industry codes of practice in the development of regulations to meet therequirements of Annex 19, and make available, for the industry codes of practice, their sources and how they may be obtained.

(7) *Operational personnel*.—Personnel involved in aviation activities who are in a position to report safety information.

Note.—Such personnel include, but are not limited to : flight crews ; air traffic controllers ; aeronautical stationoperators ; maintenance technicians ; personnel of aircraft design and manufacturing organizations ; cabin crews ; flight dispatchers, apron personnel and ground handling personnel.

(8) *Safety*.—The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.

(9) *Safety management system (SMS)*.—A systematic approach to managing safety, including the necessary organizationalstructures, accountabilities, policies and procedures.

(10) *Safety performance*.—A State or a service provider's safety achievement as defined by its safety performance targets andsafety performance indicators.

(11) *Safety performance indicator*.—A data-based parameter used for monitoring and assessing safety performance.

(12) *Safety performance target*.—The planned or intended objective for safety performance indicator(s) over a given period.

(13) *Safety Risk*.—The predicted probability and severity of the consequences or outcomes of a hazard.

(14) *Serious injury*.—An injury which is sustained by a person in an accident and which :

(*i*) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received ; or

(*ii*) results in a fracture of any bone (except simple fractures of fingers, toes or nose) ; or

(*iii*) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage ; or

(*iv*) involves injury to any internal organ ; or

(*v*) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface ; or

(*vi*) involves verified exposure to infectious substances or injurious radiation.

(15) *State of Design*.—The State having jurisdiction over the organization responsible for the type design.

(16) *State of Manufacture*.—The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

(17) *State of the Operator*.—The State in which the operator's principal place of business is located or, if there is no such place ofbusiness, the operator's permanent residence.

(18) *State Safety Programme* (*SSP*).—An integrated set of regulations and activities aimed at improving safety.

20.1.1.3.—(*a*) The following abbreviations are used in Part 20 : Abbreviations.

(1)	ADREP	Accident/Incident Data Reporting
(2)	AIS	Aeronautical Information Services
(3)	ATS	Air Traffic Services

(4)	CNS	Communications, Navigation and Surveillance
(5)	CVR	Cockpit Voice Recorder
(6)	MET	Meteorological Services
(7)	PANS	Procedures for Air Navigation Services
(8)	SAR	Search and Rescue
(9)	SARPs	Standards and Recommended Practices
(10)	SDCPS	Safety Data Collection and Processing Systems
(11)	SMM	Safety Management Manual
(12)	SMP	Safety Management Panel
(13)	SMS	Safety Management System
(14)	SSP	State Safety Programme

20.2.1. State Safety Programme

20.2.1.1. The Authority will establish an SSP for the management of safety in Nigeria, in order to achieve an acceptable level of safety performance in civil aviation. The SSP shall include the following components :

(*a*) State safety policy and objectives ;

(*b*) State safety risk management ;

(*c*) State safety assurance ; and

(*d*) State safety promotion.

20.2.1.2. The acceptable level of safety performance to be achieved will be established by the Authority.

20.2.1.3. As part of its SSP, the Authority will require that the following service providers under its authority implement an SMS :

(*a*) approved training organizations in accordance with Part 3 of these Regulations that are exposed to safety risks related to aircraft operations during the provision of their services ;

(*b*) operators of aeroplanes or helicopters authorized to conduct commercial air transport, in accordance with Part 9 of these Regulations;

Note.—When maintenance activities are not conducted by an approved maintenance organization in accordance with Part 6 of these Regulations, but under an equivalent system as in Part 9 of these Regulations, they are included in the scope of the operator's SMS.

(*c*) approved maintenance organizations providing services to operators of aeroplanes or helicopters engaged incommercial air transport, in accordance with Part 6 of these Regulations ;

(*d*) organizations responsible for the type design or manufacture of aircraft, in accordance with Part 5 of these Regulations ;

(*e*) air traffic services (ATS) providers in accordance with Part 14 of these Regulations.

Note.—The provision of AIS, CNS, MET and/or SAR services, when under the authority of an ATS provider, are included in the scope of the ATS provider's SMS. When the provision of AIS, CNS, MET and/or SAR services are wholly or partially provided by an entity other than an ATS provider, the related services that come under the authority of the ATS provider, or those aspects of the services with direct operational implications, are included in the scope of the ATS provider's SMS ; and

(*f*) operators of certified aerodromes in accordance with Part 12 of these Regulations.

20.2.1.4. As part of its SSP, the Authority will require that international general aviation operators of large or turbojet aeroplanes in accordance with Part 8 of these Regulations, implement an SMS.

(Note.—International general aviation operators are not considered to be service providers in the context of these Regulations.)

20.2.2. State Safety Oversight

20.2.2.1. The Authority will establish and implement a safety oversight system in accordance with IS. 20.2.2.1.

20.3.1. Safety Management System

20.3.1.1. Except as required in 20.3.2 the SMS of a service provider shall :

(*a*) be established in accordance with the framework elements contained in IS. 20.3.1.1. ; and

(*b*) be commensurate with the size of the service provider and the complexity of its aviation products or services.

20.3.1.2. The SMS of an approved training organization, authorised in accordance with Part 3 of these Regulations, that is exposed to safety risks related to aircraft operations during the provision of its services shall be made acceptable to the Authority.

20.3.1.3. The SMS of a certified operator of aeroplanes or helicopters authorized to conduct commercial air transport, in accordance with Part 9 of these Regulations, shall be made acceptable to the Authority, as applicable.

20.3.1.4. The SMS of an approved maintenance organization providing services to operators of aeroplanes or helicopters engaged in commercial air transport, in accordance with Part 6 of these Regulations, shall be made acceptable to the Authority.

20.3.1.5. The SMS of an organization responsible for the type design of aircraft, in accordance with Part 5 of these Regulations, shall be made acceptable to the Authority or the State of Design, as applicable.

20.3.1.6. The SMS of an organization responsible for the manufacture of aircraft, in accordance with Part 5 of these Regulations, shall be made acceptable to the Authority or the State of Manufacture, as applicable.

20.3.1.7. The SMS of an ATS provider, in accordance with Part 14 of these Regulations, shall be made acceptable to the Authority.

20.3.1.8. The SMS of an operator of a certified aerodrome, in accordance with Part 12 of these Regulations, shall be made acceptable to the Authority.

20.3.2. INTERNATIONAL GENERAL AVIATION—AEROPLANES

20.3.2.1. The SMS of an international general aviation operator, conducting operations of large or turbojet aeroplanes in accordance with Part 8 of these Regulations, shall be commensurate with the size and complexity of the operation.

20.3.2.2. The SMS shall as a minimum include :

(*a*) a process to identify actual and potential safety hazards and assess the associated risks ;

(*b*) a process to develop and implement remedial action necessary to maintain an acceptable level of safety ; and

(*c*) provision for continuous monitoring and regular assessment of the appropriateness and effectiveness of safety management activities.

20.4.1. SAFETY DATA COLLECTION—*Reporting Systems*

20.4.1.1. The Authority shall establish a mandatory incident reporting system to facilitate collection of information on actual or potential safety deficiencies.

20.4.1.2. The Authority shall establish a non-punitive voluntary incident reporting system to facilitate collection of information on actual or potential safety deficiencies that may not be captured by the mandatory incident reporting system.

20.4.1.3. Subject to Regulation 20.4.3.1, the authorities responsible for the implementation of the SSP will have access to appropriate information available in the incident reporting systems referenced in 20.4.1.1 and 20.4.1.2 to support their safety responsibilities.

Note 1.—In Nigeria, the authorities responsible for the implementation of the SSP include the Accident investigation Bureau (AIB).

20.4.2. SAFETY DATA ANALYSIS

20.4.2.1. The Authority will establish and maintain a safety database to facilitate the effective analysis of information on actual or potential safety deficiencies obtained, including that from its incident reporting systems, and to determine any actions required for the enhancement of safety.

Note.—The term "safety database" may refer to a single or multiple database(s) and may include the accident and incident database. Provisions on an accident and incident database are included in Annex 13 - Aircraft Accident and Incident Investigation.

20.4.2.2. The Authority will, following the identification of preventive actions required to address actual or potential safety deficiencies, implement these actions and establish a process to monitor implementation and effectiveness of the responses.

20.4.2.3. The database systems shall use standardized formats to facilitate data exchange.

Note.—The use of an ADREP-compatible system is to be encouraged.

20.4.3. SAFETY DATA PROTECTION

20.4.3.1. The voluntary incident reporting system referred to in 20.4.1.2 shall be non-punitive and afford protection to the sources of the information.

Note 1.*—IS. 20.4.3.1 contains legal guidance for the protection of information from safety data collection andprocessing systems.*

Note 2.*—A non-punitive environment is fundamental to voluntary reporting.*

20.4.3.2. The Authorityshall not make available or use safety data referenced in 20.4.1 or 20.4.2 for other than safety-related purposes, unless exceptionally, an appropriate authority determines in accordance with the national legislation, the value of its disclosure or use in any particular instance, outweighs the adverse impact such action may have on aviation safety.

20.4.4. SAFETY INFORMATION EXCHANGE

20.4.4.1. If the Authority, in the analysis of the information contained in its database, identifies safety matters considered to be of interest to other States, the Authority will forward such safety information to them as soon as possible.

20.4.4.2. The Authority will promote the establishment of safety information sharing networks among users of the aviation system and will facilitate the free exchange of information on actual and potential safety deficiencies.

IMPLEMENTING STANDARDS (IS)

SAFETY MANAGEMENT

IS 20.2.2.1. STATE SAFETY OVERSIGHT SYSTEM

Note 1.—Guidance on the critical elements of a system that enables a State to discharge its responsibility for safety oversight is contained in the Safety Oversight Manual, Part A, The Establishment and Management of a State's Safety Oversight System (Doc 9734).

Note 2.—The term "relevant authorities or agencies" is used in a generic sense to include all authorities with aviation safety oversight responsibility which may be established by the State as separate entities, such as: Civil Aviation Authorities, Airport Authorities, ATS Authorities, Accident Investigation Authority, and Meteorological Authority.

Note 3.—Within the context of this appendix the term "service provider" refers to those organizations listed in Part 20.2.1.3.

1. PRIMARY AVIATION LEGISLATION

1.1. NIGERIA shall promulgate a comprehensive and effective aviation law, consistent with the size and complexity ofits aviation activity and with the requirements contained in the Convention on International Civil Aviation, that enables it to regulate civil aviation and enforce regulations through the relevant authorities or agencies established for that purpose.

1.2. The aviation law shall provide personnel performing safety oversight functions access to the aircraft, operations, facilities, personnel and associated records, as applicable, of service providers.

2. SPECIFIC OPERATING REGULATIONS

2.1. The Authority shall promulgate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation, for standardized operational procedures, products, services, equipment and infrastructures in conformity with the Annexes to the Convention on International Civil Aviation.

Note.—The term "regulations" is used in a generic sense and includes but is not limited to instructions, rules, edicts, directives, sets of laws, requirements, policies and orders.

3. STATE SYSTEM AND FUNCTIONS

3.1. NIGERIA shall establish relevant authorities or agencies, as appropriate, supported by sufficient and qualifiedpersonnel and provided with adequate financial resources. Each authority or agency shall have stated safety functions and objectives to fulfill its safety management responsibilities.

3.2. The Authority shall take necessary measures, such as remuneration and conditions of service, to ensure that qualified personnel performing safety oversight functions are recruited and retained.

3.3. The Authority shall ensure that personnel performing safety oversight functions are provided with guidance thataddresses ethics, personal conduct and the avoidance of actual or perceived conflicts of interest in the performance of official duties.

3.4. The Authority shall use a methodology to determine its staffing requirements for personnel performing safety oversight functions, taking into account the size and complexity of the aviation activities in Nigeria.

4. Qualified Technical Personnel

4.1. The Authority shall establish minimum qualification requirements for the technical personnel performing safety oversight functions and provide for appropriate initial and recurrent training to maintain and enhance their competence at the desired level.

4.2. The Authority shall implement a system for the maintenance of training records.

5. Technical Guidance, Tools and Provision of Safety-Critical Information

5.1. The Authority shall provide appropriate facilities, comprehensive and up-to-date technical guidance material andprocedures, safety-critical information, tools and equipment, and transportation means, as applicable, to the technical personnel to enable them to perform their safety oversight functions effectively and in accordance with established procedures in a standardized manner.

5.2. The Authority shall provide technical guidance to the aviation industry on the implementation of relevant regulations.

6. Licensing, Certification, Authorization and/or Approval Obligations

The Authority shall implement documented processes and procedures to ensure that personnel and organizations performing anaviation activity meet the established requirements before they are allowed to exercise the privileges of a licence, certificate, authorization and/or approval to conduct the relevant aviation activity.

7. Surveillance Obligations

The Authority shall implement documented surveillance processes, by defining and planning inspections, audits, and monitoringactivities on a continuous basis, to proactively assure that aviation licence, certificate, authorization and/or approval holderscontinue to meet the established requirements. This includes the surveillance of personnel designated by the

Authority toperform safety oversight functions on its behalf.

8. Resolution of Safety Issues

8.1. The Authority shall use a documented process to take appropriate corrective actions, up to and including enforcement measures, to resolve identified safety issues.

8.2. The Authority shall ensure that identified safety issues are resolved in a timely manner through a system which monitors and records progress, including actions taken by service providers in resolving such issues.

IS. 20.3.1.1. Framework for a Safety Management System (SMS)

Note 1.—*Guidance on the implementation of the framework for an SMS is contained in the Safety Management Manual(SMM) (Doc 9859).*

Note 2.—*Within the context of this appendix, the term "service provider" refers to those organizations listed in Part* 20.2.1.3.

This Implementing Standard specifies the framework for the implementation and maintenance of an SMS. The framework comprises four components and twelve elements as the minimum requirements for SMS implementation :

1. Safety Policy and Objectives

1.1. Management commitment and responsibility.
1.2. Safety accountabilities.
1.3. Appointment of key safety personnel.
1.4. Coordination of emergency response planning.
1.5. SMS documentation.

2. Safety Risk Management

2.1. Hazard identification.
2.2. Safety risk assessment and mitigation.

3. Safety Assurance

3.1. Safety performance monitoring and measurement.
3.2. The management of change.
3.3. Continuous improvement of the SMS.

4. Safety Promotion

4.1. Training and education.
4.2. Safety communication.

1. Safety policy and objectives

Management commitment and responsibility.

1.1. The service provider shall define its safety policy in accordance with international and national requirements. The safetypolicy shall :

(*a*) reflect organizational commitment regarding safety ;

(*b*) include a clear statement about the provision of the necessary resources for the implementation of the safety policy ;

(*c*) include safety reporting procedures ;

(*d*) clearly indicate which types of behaviours are unacceptable related to the service provider's aviation activities andinclude the circumstances under which disciplinary action would not apply ;

(*e*) be signed by the accountable executive of the organization ;

(*f*) be communicated, with visible endorsement, throughout the organization ; and

(*g*) be periodically reviewed to ensure it remains relevant and appropriate to the service provider.

Safety Accountabili-ties.

1.2. The service provider shall :

(*a*) identify the accountable executive who, irrespective of other functions, has ultimate responsibility and accountability, on behalf of the organization, for the implementation and maintenance of the SMS ;

(*b*) clearly define lines of safety accountability throughout the organization, including a direct accountability for safetyon the part of senior management ;

(*c*) identify the accountabilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the SMS ;

(*d*) document and communicate safety responsibilities, accountabilities and authorities throughout the organization ; and

(*e*) define the levels of management with authority to make decisions regarding safety risk tolerability.

Appointment of key safety personnel.

1.3. The service provider shall appoint a safety manager who is responsible for the implementation and maintenance of aneffective SMS.

Coordination of emergency response planning.

1.4. The service provider shall ensure that an emergency response plan is properly coordinated with the emergency response plansof those organizations it must interface with during the provision of its products and services.

1.5. SMS Documentation

1.5.1.The service provider shall develop an SMS implementation plan, formally endorsed by the organization, thatdefines the organization's approach to the management of safety in a manner that meets the organization's safety objectives.

1.5.2. The service provider shall develop and maintain SMS documentation that describes its :

(*a*) safety policy and objectives ;

(*b*) SMS requirements ;

(*c*) SMS processes and procedures ;

(*d*) accountabilities, responsibilities and authorities for SMS processes and procedures ; and

(*e*) SMS outputs.

1.5.3. The service provider shall develop and maintain an SMS manual as part of its SMS documentation.

2. SAFETY RISK MANAGEMENT

2.1. HAZARD IDENTIFICATION

2.1.1. The service provider shall develop and maintain a process that ensures that hazards associated with its aviationproducts or services are identified.

2.1.2. Hazard identification shall be based on a combination of reactive, proactive and predictive methods of safety datacollection.

2.2. Safety risk assessment and mitigation

The service provider shall develop and maintain a process that ensures analysis, assessment and control of the safety risksassociated with identified hazards.

3. SAFETY ASSURANCE

3.1. Safety performance monitoring and measurement.

3.1.1. The service provider shall develop and maintain the means to verify the safety performance of the organizationand to validate the effectiveness of safety risk controls.

3.1.2. The service provider's safety performance shall be verified in reference to the safety performance indicators andsafety performance targets of the SMS.

The management of change.

3.2. The service provider shall develop and maintain a process to identify changes which may affect the level of safety riskassociated with its aviation products or services and to identify and manage the safety risks that may arise from those changes.

Continuous improvement of the SMS.

3.3. The service provider shall monitor and assess the effectiveness of its SMS processes to enable continuous improvement ofthe overall performance of the SMS.

4. SAFETY PROMOTION

4.1. TRAINING AND EDUCATION

4.1.1. The service provider shall develop and maintain a safety training programme that ensures that personnel aretrained and competent to perform their SMS duties.

4.1.2. The scope of the safety training programme shall be appropriate to each individual's involvement in the SMS.

Safety Communication

4.2. The service provider shall develop and maintain a formal means for safety communication that :

(*a*) ensures personnel are aware of the SMS to a degree commensurate with their positions ;

(*b*) conveys safety-critical information ;

(*c*) explains why particular safety actions are taken ; and

(*d*) explains why safety procedures are introduced or changed.

IS. 20.4.3.1. LEGAL GUIDANCE FOR THE PROTECTIONOF INFORMATION FROM SAFETY DATA COLLECTIONAND PROCESSING SYSTEMS

1. INTRODUCTION

1.1. The protection of safety information from inappropriate use is essential to ensure its continued availability, since the use of safety information for other than safety-related purposes may inhibit the future availability of such information, with an adverse effect on safety. This fact was recognized by the 35th Session of the ICAO Assembly, which noted that existing national laws and regulations in many States may not adequately address the manner in which safety information is protected from inappropriate use.

1.2. The guidance contained in this attachment is therefore aimed at assisting States enact national laws and regulations to protect information gathered from safety data collection and processing systems (SDCPS), while allowing for the proper administration of justice. The objective is to prevent the inappropriate use of information collected solely for the purpose of improving aviation safety.

1.3. Because of the different legal systems in States, the legal guidance must allow States the flexibility to draft their laws and regulations in accordance with their national policies and practices.

1.4. The guidance contained in this attachment, therefore, takes the form of a series of principles that have been distilled from examples of national laws and regulations provided by States. The concepts described in these principles could be adapted or modified to meet the particular needs of the

State enacting laws and regulations to protect safety information.

1.5. Throughout this attachment :

(*a*) safety information refers to information contained in SDCPS established for the sole purpose of improving aviation safety, and qualified for protection under specified conditions in accordance with 3.1 below ;

(*b*) inappropriate use refers to the use of safety information for purposes different from the purposes for which it was collected, namely, use of the information for disciplinary, civil, administrative and criminal proceedings against operational personnel, and/or disclosure of the information to the public ;

(*c*) SDCPS refers to processing and reporting systems, databases, schemes for exchange of information, and recorded information and include :

(1) records pertaining to accident and incident investigations, as described in Annex 13, Chapter 5 ;

(2) mandatory incident reporting systems, as described in Part 20.4.1.1. of this Regulation ;

(3) voluntary incident reporting systems, as described in Part 20.4.1.2. of this Regulation ; and

(4) self-disclosure reporting systems, including automatic data capture systems, as described in Annex 6, Part I, Chapter 3, as well as manual data capture systems.

Note.— Information on Safety Data Collection and Processing Systems can be found in the Safety Management Manual.

2. General Principles

2.1. The sole purpose of protecting safety information from inappropriate use is to ensure its continued availability sothat proper and timely preventive actions can be taken and aviation safety improved.

2.2. It is not the purpose of protecting safety information to interfere with the proper administration of justice in States.

2.3. National laws and regulations protecting safety information should ensure that a balance is struck between the need for the protection of safety information in order to improve aviation safety, and the need for the proper administration of justice.

2.4. National laws and regulations protecting safety information should prevent its inappropriate use.

2.5. Providing protection to qualified safety information under specified conditions is part of a State's safetyresponsibilities.

3. Principles of Protection

3.1 Safety information should qualify for protection from inappropriate use according to specified conditions thatshould include, but not necessarily be limited to, whether the collection of information was for explicit safety purposes and if the disclosure of the information would inhibit its continued availability.

3.2. The protection should be specific for each SDCPS, based upon the nature of the safety information it contains.

3.3. A formal procedure should be established to provide protection to qualified safety information, in accordance with specified conditions.

3.4. Safety information should not be used in a way different from the purposes for which it was collected.

3.5. The use of safety information in disciplinary, civil, administrative and criminal proceedings should be carried out only under suitable safeguards provided by national law.

4. PRINCIPLES OF EXCEPTION

Exceptions to the protection of safety information should only be granted by national laws and regulations when :

(*a*) there is evidence that the occurrence was caused by an act considered, in accordance with the law, to be conduct with intent to cause damage, or conduct with knowledge that damage would probably result, equivalent to reckless conduct, gross negligence or wilful misconduct ;

(*b*) an appropriate authority considers that circumstances reasonably indicate that the occurrence may have been caused by conduct with intent to cause damage, or conduct with knowledge that damage would probably result, equivalent to reckless conduct, gross negligence or wilful misconduct ; or

(*c*) review by an appropriate authority determines that the release of the safety information is necessary for the proper administration of justice, and that its release outweighs the adverse domestic and international impact such release may have on the future availability of safety information.

5. PUBLIC DISCLOSURE

5.1. Subject to the principles of protection and exception outlined above, any person seeking disclosure of safety information should justify its release.

5.2. Formal criteria for disclosure of safety information should be established and should include, but not necessarily belimited to, the following :

(*a*) disclosure of the safety information is necessary to correct conditions that compromise safety and/or to change policies and regulations ;

(*b*) disclosure of the safety information does not inhibit its future availability in order to improve safety ;

(*c*) disclosure of relevant personal information included in the safety information complies with applicable privacy laws ; and (*d*) disclosure of the safety information is made in a de-identified, summarized or aggregate form.

6. Responsibility of the Custodian of Safety Information

Each SDCPS should have a designated custodian. It is the responsibility of the custodian of safety information to apply all possible protection regarding the disclosure of the information, unless :

(*a*) the custodian of the safety information has the consent of the originator of the information for disclosure ; or

(*b*) the custodian of the safety information is satisfied that the release of the safety information is in accordance with the principles of exception.

7. Protection of Recorded Information

Considering that ambient workplace recordings required by legislation, such as cockpit voice recorders (CVRs), may be perceived as constituting an invasion of privacy for operational personnel that other professions are not exposed to:

(*a*) subject to the principles of protection and exception above, national laws and regulations should consider ambient workplace recordings required by legislation as privileged protected information, i.e. information deserving enhanced protection ; and

(*b*) national laws and regulations should provide specific measures of protection to such recordings as to their confidentiality and access by the public. Such specific measures of protection of workplace recordings required by legislation may include the issuance of orders of non-public disclosure.