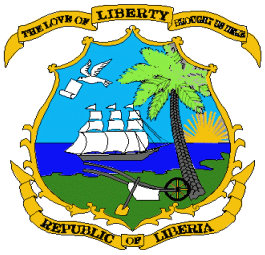
LIBERIA
CIVIL AVIATION REGULATIONS

PART 2
PERSONNEL LICENSING

EDITION 3.0

JULY 2021

THE

LIBERIA  **OFFICIAL**

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E X T R A O R D I N A R Y

The Government of the Republic of Liberia announces that the Liberia Civil Aviation Authority, pursuant to its mandate under the Liberia Civil Aviation Act of 2019, and specifically consistent with Subchapter XII, Section 1218 (1), has issued on August 11, 2021 its Regulation N0. LCAA/LCAR/001/2021, herein under:

CONCERNING LIBERIA CIVIL AVIATION REGULATIONS

BY ORDER OF THE PRESIDENT

AMB. DEE-MAXWELL SAAH KEMAYAH, SR.
MINISTER OF FOREIGN AFFAIRS

MINISTRY OF FOREIGN AFFAIRS

MONROVIA, LIBERIA

AUTHORITY TO PROMULGATE

CIVIL AVIATION REGULATIONS

IN EXERCISE OF THE POWERS CONFERRED ON THE DIRECTOR GENERAL OF LIBERIA CIVIL AVIATION AUTHORITY UNDER THE LIBERIA CIVIL AVIATION ACT OF 2019 THESE REGULATIONS ARE MADE.

DATE:13th July 2021

SIGNATURE: 

Hon. Moses Y. Kollie
DIRECTOR GENERAL

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AMENDMENTS

LOCATION	DATE	DESCRIPTION

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INTRODUCTION

Part 2 addresses the licensing of personnel. Article 32 of the Chicago Convention requires Liberia to issue certificates of competency and licenses or validate such certificates or licenses issued by other Contracting States to the pilot of every aircraft and to other members of the operating crew of every aircraft engaged in international navigation. The basis of this obligation is the goal of promoting and conducting safe and regular aircraft operations through the development and implementation of internationally acceptable certification and licensing processes. The same process is extended to domestic operations to ensure the overall safety of aircraft operation through uniformity of licensing requirements. ICAO Annex 1, Personnel Licensing, presents the broad international specifications for personnel licensing agreed upon by Contracting States. Part 2 of these Regulations presents detailed requirements for the general rules of licensing and detailed requirements for the certification of airmen, pilots, non-pilot flight crewmembers, and airmen, such as Engineers, who are not flight crew. Part 2 also presents medical standards for the granting of licensing and certification, and for the administration of medical examinations. The licensing and medical standards are based upon ICAO Annex 1, through Amendment 177.

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PART 2— PERSONNEL LICENSING

2.1 GENERAL

2.1.1 APPLICABILITY

(a) Part 2 prescribes:

(1) The requirements for issuing, renewal and re-issue of aviation personnel licenses, ratings, authorizations and certificates;

(2) The conditions under which those licenses, ratings, authorizations and certificates are necessary; and

(3) The privileges and limitations granted to the holders of those licenses, ratings, authorizations and certificates.

2.1.2 DEFINITIONS

(a) When the following terms are used in the Standards and Recommended Practices for Personnel Licensing, they have the following meanings:

(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) **Adopted competency model.** A group competencies with their associated description and performance criteria adapted from an ICAO competency framework that an organization uses to develop competency-based training and assessment for a given role.

(3) **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.

(4) **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.

(5) **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.

(6) **Aircraft — category.** Classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.

(7) **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.

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

(13) **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.

Note. — Nothing in this definition is intended to preclude that the organization and its supervision be approved by more than one State.

(14) **Approved maintenance organization.** An organization approved by a Contracting State, in accordance with the requirements of Annex 8, Part II, and Chapter 6— Maintenance Organization Approval, to perform maintenance of aircraft, engine, propeller or parts thereof and operating under supervision approved by that State.

Note. — Nothing in this definition is intended to preclude that the organization and its supervision be approved by more than one State.

(15) **Approved training.** Training conducted under special curricula and supervision approved by a Contracting State.

(16) **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.

(17) **ATS surveillance service.** A term used to indicate a service provided directly by means of an ATS surveillance system.

(18) **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.

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

Note. — For the purposes of this Annex, this definition applies to free balloons.

(20) **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.

(21) **Command and control (C2) link**. The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight

(21a) ***C2 Link.†††*** The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

(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-based training and assessment**. Training and assessment that are characterized by a performance orientation, emphasis on standards of performance and their measurement, and the development of training to the specified performance standards

(25) **Competency standard.*** A level of performance that is defined as acceptable when assessing whether or not competency has been achieved

(26) **Conditions.*** Anything that may qualify a specific environment in which performance will be demonstrated.

(27) **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.

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

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

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

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

(32) **Dual instruction time**. Flight time during which a person is receiving flight instruction from a properly authorized pilot on board the aircraft, or from a properly authorized remote pilot using the remote pilot station during a remotely piloted aircraft flight.

(33) **Error.** An action or inaction by an operational person that leads to deviations from organizational or the operational person's intentions or expectations.

Note. — See Chapter 1 of Annex 19 — Safety Management for a definition of operational personnel.

(34) **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.

(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 units, relative to an intended flight or portion of a flight of an aircraft.

(37) **Flight procedures trainer.** See Flight simulation training device.

(38) **Flight simulation training device (FSTD)**.††† Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

(a) *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;

(b) *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;

(c) *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.

(39) **Flight simulation training device (FSTD).††††** Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

(a) *A flight simulator*, which provides an accurate representation of the flight deck of a particular aircraft type or an accurate representation of the remotely piloted aircraft system (RPAS) 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;

(b) *A flight procedures trainer,* which provides a realistic flight deck environment or realistic RPAS 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;

(c) *A basic instrument flight trainer,* which is equipped with appropriate instruments, and which si

(40) **Flight simulator.** See Flight simulation training device.

(41) **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.

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 aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.

(42) **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.

(43) **Flight time — remotely piloted aircraft systems.** The total time from the moment a command and control (C2) link is established between the remote pilot station (RPS) and the remotely piloted aircraft (RPA) for the purpose of taking off or from the moment the remote pilot receives control following a handover until the moment the remote pilot completes a handover or the C2 link between the RPS and the RPA is terminated at the end of the flight.

(43a) ***Flight time — remotely piloted aircraft systems.††††*** The total time from the moment a C2 Link is established between the remote pilot station (RPS) and the remotely piloted aircraft (RPA) for the purpose of taking off or from the moment the remote pilot receives control following a handover until the moment the remote pilot completes a handover or the C2 Link between the RPS and the RPA is terminated at the end of the flight.

(44) **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.

(45) **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.

(46) **Handover.** The act of passing piloting control from one remote pilot station to another.

(47) **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.

(48) **Human performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

(49) **ICAO competency framework.*** A competency framework, developed by ICAO, is a selected group of competencies for a given aviation discipline. Each competency has an associated description and observable behaviours.

(50) **Instrument flight time.** Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

(51) **Instrument flight time.** Time during which a pilot is piloting an aircraft, or a remote pilot is piloting a remotely piloted aircraft, solely by reference to instruments and without external reference points.

(52) **Instrument ground time.** Time during which a pilot is practicing, on the ground, simulated instrument flight in a flight simulation training device approved by the Licensing Authority.

(53) **Instrument time.** Instrument flight time or instrument ground time.

(54) **Licensing Authority.** The Authority designated by a Contracting State as responsible for the licensing of personnel.

Note. — In the provisions of this Annex, the Licensing Authority is deemed to have been given the following responsibilities by the Contracting State:

a) assessment of an applicant's qualifications to hold a license or rating;

b) issue and endorsement of licenses and ratings;

c) designation and authorization of approved persons;

d) approval of training courses;

e) approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a license or rating; and validation of licenses issued by other Contracting States.

(55) **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.

(56) **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.

(57) **Medical Assessment.** The evidence issued by a Contracting State that the license holder meets specific requirements of medical fitness.

(58) **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.

Note 1. — Medical assessors evaluate medical reports submitted to the Licensing Authority by medical examiners.

Note 2. — Medical assessors are expected to maintain the currency of their professional knowledge.

(59) **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 licenses or ratings for which medical requirements are prescribed.

(60) **Monitoring.** A cognitive process to compare an actual to an expected state.

Note. – Monitoring is embedded in the competencies for a given role within an aviation discipline, which serve as countermeasures in the threat and error management model. It requires knowledge, skills and attitudes to create a mental model and to take appropriate action when deviations are recognized.

(61) **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.

Note. — Civil twilight ends in the evening when the center of the sun's disc is 6 degrees below the horizon and begins in the morning when the center of the sun's disc is 6 degrees below the horizon.

(62) **Observable behavior (OB).*** A single role-related behavior that can be observed and may or may not be measurable.

(63) **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.

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

(65) **Pilot flying (PF).** The pilot whose primary task is to control and manage the flight path. The secondary tasks of the PF are to perform non-flight path related actions (radio communications, aircraft systems, other operational activities, etc.) and to monitor other crew members.

(66) **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.

(67) **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.

(68) **Pilot monitoring (PM).** The pilot whose primary task is to monitor the flight path and its management by the PF. The secondary tasks of the PM are to perform non–flight path related actions (radio communications, aircraft systems, other operational activities, etc.) and to monitor other crew members.

(69) **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.

(70) **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.

(71) **Psychoactive substances.** Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

(72) **Quality system.** Documented organizational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.

(73) **Rated air traffic controller.** An air traffic controller holding a license and valid ratings appropriate to the privileges to be exercised.

(74) **Rating.** An authorization entered on or associated with a license and forming part thereof, stating special conditions, privileges or limitations pertaining to such license.

(75) **Remote co-pilot.** A licensed remote pilot serving in any capacity other than as remote pilot-in-command but excluding a remote pilot who is in the remote pilot station for solo purposes of receiving flight instruction.

(76) **Remote flight crew member**. A licensed flight crew member charged with duties essential to the operation of a remotely piloted aircraft system during a flight duty period.

(77) **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.

(78) **Remote pilot-in-command.** The remote pilot designated by the operator as being in command and charged with the safe conduct of a flight.

(79) **Remote pilot station (RPS).** The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

(80) **Remotely piloted aircraft (RPA).** An unmanned aircraft which is piloted from a remote pilot station.

(81) **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.

(81a) ***Remotely piloted aircraft system (RPAS).†††*** A remotely piloted aircraft, its associated remote pilot station(s), the required C2 Link(s) and any other components as specified in the type design.

(82) **Rendering (a license) valid.** The action taken by a Contracting State, as an alternative to issuing its own license, in accepting a license issued by any other Contracting State as the equivalent of its own license.

(83) **Rotorcraft.** A power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors.

(84) **Sign a maintenance release (to*).*** To certify that maintenance work has been completed satisfactorily in accordance with appropriate airworthiness requirements, by issuing the maintenance release referred to in Annex 6 (in the case of a release not issued by an approved maintenance organization) or Annex 8 (in the case of a release issued by an approved maintenance organization).

(85) **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.

(86) **Solo flight time.** Flight time during which a student pilot is the sole occupant of an aircraft.

(87) **Solo flight time — *remotely piloted aircraft systems.*** Flight time during which a student remote pilot is controlling the remotely piloted aircraft system, acting solo.

(88) **State safety program (SSP).** An integrated set of regulations and activities aimed at improving safety.

(89) **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.

Note. — See Chapter 1 of Annex 19 — Safety Management *for a definition of operational personnel.*

(90) **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.

2.1.3 ABBREVIATIONS

The following abbreviations are used in Part 2:

(1) **A** – Aeroplane.
(2) **AFIS** - Aerodrome flight information service
(3) **AIP** – Aeronautical Information Publication.
(4) **AME** – Aviation Medical Examiner.
(5) **AMOC** - Alternate means of compliance
(6) **AMT** – Aviation Maintenance Technician.
(7) **ATCO** – Air Traffic Controller (Note: abbreviation ICAO A446).
(8) **AS** – Airship.
(9) **ATPL** – Airline Transport Pilot License.
(10) **B** – Balloon.
(11) **C2** - Command and control
(12) **CAT II** – Category II.
(13) **CAT III** – Category III.
(14) **CPL** – Commercial Pilot License.
(15) **CRM** – Crew Resource Management.
(16) **DFEE** – Designated Flight Engineer Examiner.
(17) **DFNE** – Designated Flight Navigator Examiner.
(18) **DFOOE** – Designated Flight Operations Officer Examiner.
(19) **DME** – Designated Mechanic Examiner.
(20) **DPE** – Designated Pilot Examiner.
(21) **DPRE** – Designated Parachute Rigger Examiner.
(22) **FE** – Flight Engineer.
(23) **FI** – Flight Instructor.
(24) **FOO** – Flight Operations Officer.
(25) **FSTD** - Flight simulation training device
(26) **G** – Glider.
(27) **HIV** - Human immunodeficiency virus
(28) **IA** – Inspection Authorization.
(29) **IFR** – Instrument Flight Rules.
(30) **ILS** – Instrument Landing System.
(31) **H** – Helicopter.
(32) **LCAA** – Liberia Civil Aviation Authority
(33) **ICAO** – International Civil Aviation Organisation.
(34) **MPA** – Multi-pilot Aeroplane.
(35) **MPH** – Multi-pilot Helicopter.
(36) **MPL** – Multi-crew Pilot License
(37) **NOTAM** – Notice to airmen.
(38) **PIC** – pilot-in-command.

(39) **PL** – Powered-lift
(40) **PPL** – Private Pilot License.
(41) **RP** – Remote Pilot.
(42) **RPA** – Remotely Piloted Aircraft.
(43) **RPAS** - Remotely piloted aircraft system
(44) **RPS** - Remote pilot station
(45) **RT** – Radiotelephony.
(46) **SOP** - Standard operating procedure
(47) **SPA** – Single-pilot Aeroplane.
(48) **SPH** – Single-pilot Helicopter.
(49) **STS** – Skill test standard
(50) **TEM** - Threat and error management
(51) **VFR** – Visual Flight Rules.
(52) **VMC** - Visual meteorological conditions

2.2 GENERAL RULES CONCERNING PILOT LICENSES AND RATINGS

2.2.1 GENERAL RULES CONCERNING LICENSING

(a) Although the Convention on International Civil Aviation allocates to the State of Registry certain functions which that State is entitled to discharge, or obligated to discharge, as the case may be, the Assembly recognized, in Resolution A23-13, that the State of Registry may be unable to fulfill its responsibilities adequately in instances where aircraft are leased, chartered or interchanged — in particular without crew — by an operator of another State and that the Convention may not adequately specify the rights and obligations of the State of an operator in such instances until such time as Article 83 bis of the Convention enters into force. Accordingly, the Council urged that if, in the above-mentioned instances, the State of Registry finds itself unable to discharge adequately the functions allocated to it by the Convention, it delegate to the State of the Operator, subject to acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. While Article 83 bis of the Convention entered into force on 20 June 1997 in respect of Authorities which have ratified the related Protocol (Doc 9318), the foregoing action will remain particularly relevant for those Authorities which do not have treaty relations under Article 83 bis. It was understood that pending entry into force of Article 83 bis of the Convention, the foregoing action would only be a matter of practical convenience and would not affect either the provisions of the Chicago Convention prescribing the duties of the State of Registry or any third State. However, as Article 83 bis of the Convention entered into force on 20 June 1997, such transfer agreements will have effect in respect of Authorities which have ratified the related Protocol (Doc 9318) upon fulfillment of the conditions established in Article 83 bis.

(b) International Standards and Recommended Practices are established for licensing the following personnel:

(1) Flight crew

(i) private pilot — aeroplane, airship, helicopter or powered-lift;

(ii) commercial pilot — aeroplane, airship, helicopter or powered-lift;

(iii) multi-crew pilot — aeroplane;

(iv) airline transport pilot — aeroplane, helicopter or powered-lift

(v) glider pilot;

(vi) free balloon pilot;

(vii) flight navigator;

(viii) flight engineer; and

(ix) As of 3 November 2022, remote pilot - aeroplane, airship, glider, rotorcraft, powered-lift or free balloon

(2) Other personnel

(i) aircraft maintenance (technician/engineer/ mechanic);

(ii) air traffic controller;

(iii) flight operations officer/flight dispatcher;

(iv) aeronautical station operator.

2.2.1.1 Licenses

(a) 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 license issued in accordance with the provisions of this Part:

(1) aeroplane

(2) airship of a volume of more than 4 600 cubic meters

(3) free balloon

(4) glider

(5) helicopter

(6) powered-lift.

(b) The category of aircraft shall be included in the title of the license itself, or endorsed as a category rating on the license.

(c) When the holder of a pilot license seeks a license for an additional category of aircraft, the Licensing Authority shall either:

(1) issue the license holder with an additional pilot license for that category of aircraft; or

(2) endorse the original license with the new category rating, subject to the conditions of in this part.

Note. — The requirements for category ratings are given in terms of licensing specifications for pilots and at levels appropriate to the privileges to be granted to the license holder.

(d) An applicant shall, before being issued with any pilot license or rating, meet such requirements in respect of age, knowledge, experience, flight instruction, skill and medical fitness, as are specified for that license or rating.

(e) An applicant for any pilot license or rating shall demonstrate, in a manner determined by the Licensing Authority, such requirements for knowledge and skill as are specified for that license or rating.

(f) **Transitional measures related to the powered-lift category**: Until 25 March 2022, The Licensing Authority may endorse a type rating for aircraft of the powered-lift category on an aeroplane or helicopter pilot license. The endorsement of the rating on the license shall indicate that the aircraft is part of the powered-lift category. The training for the type rating in the powered-lift category shall be completed during a course of approved training, shall take into account the previous experience of the applicant in an aeroplane or a helicopter as appropriate and incorporate all relevant aspects of operating an aircraft of the powered-lift category.

2.2.1.2 Ratings

(a) The Authority may issue the following ratings to place on a pilot license or flight instructor license 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 may be issued for those helicopters 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.

(b) A class rating or endorsement for High Performance Aeroplanes (HPA) requires additional knowledge, if the applicant has not completed the ATPL (A) knowledge requirements.

(1) 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.

(2) 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.

(3) Flight Instructor ratings:

(i) The appropriate aircraft category, class, instrument and/or type rating according to the instruction to be taught.

(4) The Authority may issue the following ratings to place on a ground instructor's license when an applicant satisfactorily accomplished the requirements of this Part for the rating sought:

(i) Basic.

(ii) Advanced.

(iii) Instrument.

(c) The Authority may issue the following ratings to place on a flight engineer's license 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.

(4) The Authority may issue the following ratings to place on an air traffic controller license when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought:

(5) Aerodrome control rating.

(6) Approach control rating.

(7) Approach radar control rating.

(8) Approach precision radar control rating.

(9) Area control rating.

(10) Area radar control rating.

(d) The Authority may issue the following ratings to place on an aircraft maintenance technician license 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 repairman specialist license.

(f) The Authority may issue the following ratings to place on a parachute rigger's license when an applicant satisfactorily accomplished the requirements of this Part for the rating sought:

(1) Seat.

(2) Back.

(3) Chest.

(4) Lap.

2.2.1.3 Authority to act as a flight crew member

(a) A person shall not act as a flight crew member of an aircraft unless a valid license is held showing compliance with the specifications of this Annex and appropriate to the duties to be performed by that person. The license shall have been issued by the State of Registry of that aircraft or by any other Contracting State and rendered valid by the State of Registry of that aircraft.

(b) As of 3 November 2022, a person shall not act as a flight crew member of an aircraft or as a remote flight crew member of a RPAS unless a valid license is held showing compliance with the specifications of this Part and appropriate to the duties to be performed by that person.

(c) As of 3 November 2022, the flight crew member license shall have been issued by the State of Registry of that aircraft or by any other Contracting State and rendered valid by the State of Registry of that aircraft.

(d) As of 3 November 2022, the remote pilot license shall have been issued by the Licensing Authority of the State of the Operator of the RPAS or by any other Contracting State and rendered valid by the Licensing Authority of the State of the Operator of the RPAS.

(e) As of 3 November 2022, remote pilots shall carry their appropriate license while engaged in international air operations.

Note. — Article 29 of the Convention on International Civil Aviation requires that the flight crew members carry their appropriate licenses on board every aircraft engaged in international air navigation.

(f) A person shall not act as a pilot flight crewmember of an aircraft registered in Liberia unless a valid license 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.

(g) 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.

(h) No person may act as a FE of an aircraft unless that person holds the appropriate FE license and class rating for the aircraft to be flown.

2.2.1.4 Method of rendering a license valid

(a) When the Authority renders valid a license issued by another Authority, as an alternative to the issuance of its own license, it shall establish validity by suitable authorization to be carried with the former license accepting it as the equivalent of the latter. When a State limits the authorization to specific privileges, the authorization shall specify the privileges of the license which are to be accepted as its equivalent. The validity of the authorization shall not extend beyond the period of validity of the license. The authorization ceases to be valid if the license upon which it was issued is revoked or suspended.

Note. — This provision is not intended to preclude the State that issued the license from extending, by a suitable notification, the period of validity of the license without necessarily requiring either the physical return of the license or the appearance of the license holder before the Authorities of that State.

(b) When an authorization under (a) above is issued for use in commercial air transport operations, the Licensing Authority shall confirm the validity of the other Authority's license before issuing the authorization.

(c) Rendering a license valid pursuant to a formal agreement between Authorities under common licensing regulations

(d) Notwithstanding the provisions in (a) and (b) above, Authorities may automatically render valid each other's licenses, provided that the States shall have:

(1) adopted common licensing regulations that are compliant with this Annex;

(2) entered into a formal agreement recognizing the automatic validation process;

(3) established a surveillance system to ensure the continuing implementation of the common licensing regulations; and

(4) registered the agreement with ICAO pursuant to Article 83 of the Convention on International Civil Aviation.

Note 1. — The registry of agreements with their associated list of Authorities can be found in ICAO's Database of Aeronautical Agreements and Arrangements.

Note 2. — Common licensing regulations refer to a common licensing regulatory framework that is legally binding and directly applicable to Authorities party to the agreement, recognizing the automatic validation process. Common licensing regulations used by those States contain identical requirements for license issuance, maintenance of competency and recent experience. A regional aviation safety body can develop and maintain these common regulations for its member States.

(e) An endorsement shall appear on licenses rendered valid under the process of (d) above indicating that the license is automatically validated under the agreement described in (d) and referencing the ICAO registration number of the agreement. The endorsement shall further include a list of all States that are party to the agreement. (f) provides, a transition period for States that meet the requirements in (d) and have issued licenses prior to the applicability of this Standard.

(f) Until 31 December 2022, Authorities that meet the requirements in (d) and have issued licenses prior to 9 November 2017 may use other effective means, carried on board the aircraft or accessible, to indicate that the licenses issued by the State are rendered valid in accordance with the agreement in (d).

Note. — Guidance on the format for the endorsement is contained in Attachment C. The guidance also includes how to make use of an attachment to the license, as part of the endorsement, for information that may change over time, i.e. the ICAO registration number of the agreement and the list of all States that are party to the agreement.

(g) A pilot license issued by an authority shall be rendered valid by other Authorities for use in private flights.

Note. — Authority which, without formality, render valid a license issued by another Authority for use in private flights are encouraged to notify this facility in their Aeronautical Information Publications.

2.2.1.5 Privileges of the holder of a license

The Authority shall not permit the holder of a license to exercise privileges other than those granted by that license.

2.2.1.6 Authorizations

(a) The Authority may issue the following authorizations when an applicant satisfactorily accomplishes the requirements in this Part for the authorization sought:

(1) Student pilot authorization.

(2) Instructor authorization for training in a flight simulation training device.

Note: if the State prefers, a student pilot license or certificate can be issued.

(b) The Authority may issue the following authorizations to place on a pilot license when an applicant satisfactorily accomplishes the requirements in this Part for the authorization sought:

(1) Category II pilot authorization.

(2) Category III pilot authorization.

(c) The Authority may issue the following authorization to place on an AMT license when an applicant satisfactorily accomplished the requirements in the Part for the authorization sought:

(1) Inspection authorization.

2.2.1.7 Endorsements

(a) A pilot may receive the following endorsements from an authorized instructor when he/she satisfactorily accomplished the required training in this Part:

(1) Complex aeroplane endorsement.

(2) High performance aeroplane endorsement.

(3) High altitude aircraft endorsement.

(4) Night vision goggles endorsement.

2.2.1.8 Certificates

(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 and ATPL licenses; flight instructor licenses and DPEs;

(2) Medical certificate Class 2 for student pilot authorization, PPL, Flight Engineer, and Flight Navigator licenses;

(3) Medical certificate Class 3 for Air traffic controller license.

(b) The Authority may issue the following certificates to pilots and flight engineers holding a license from another ICAO Contracting State.

(1) Validation certificates.

(c) The Authority may issue certificates of designation to representatives of the Director General of Aviation as identified in 2.2.2.6 below.

Note: The ICAO Annex 1 medical assessment for FE and FN will change from a Class 1 medical assessment to a Class 2 medical assessment effective November 23, 2006.

2.2.1.9 Designation of Representatives of the Director General of Civil Aviation

(a) The Authority may issue the following designations to private persons to act on behalf of the Director General of Civil Aviation, as specified in this Part:

(1) DPE;

(2) DFEE;

(3) DFNE;

(4) DFOOE;

(5) DME;

(6) DPRE;

(7) AME; or

(8) Other designees as may be determined by the Authority.

2.2.1.10 Validity of Licenses, Ratings, Authorizations and Certificates

(a) The Authority, having issued a license, shall ensure that the privileges granted by that license, or by related ratings, are not exercised unless the holder maintains competency and meets the requirements for recent experience established by that State.

(b) The Authority shall establish maintenance of competency and recent experience requirements for pilot licenses 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 appropriate to that State.

(c) The Authority, having issued a license, shall ensure that other Authorities are enabled to be satisfied as to the validity of the license.

Note 1. — Until 2 November 2022, the maintenance of competency of flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Annex 6.

Note 2. — As of 3 November 2022, maintenance of competency may be satisfactorily recorded in the operator's records, or in the flight crew member's personal log book or license.

Note 3. — Until 2 November 2022, f*light crew members may, to the extent deemed feasible by the State of Registry, demonstrate their continuing competency in flight simulation training devices approved by that State.*

Note 4. — As of 3 November 2022, See the Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625).

Note 5. — Until 2 November 2022, s*ee the* Manual of Procedures for Establishment and Management of a State's Personnel Licensing System *(Doc 9379) for guidance*

(d) The Authority, having issued a license, shall ensure that other Contracting States are enabled to be satisfied as to the validity of the license.

Note 1. — As of 3 November 2022, the maintenance of competency of flight crew members or remote flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Annex 6.

Note 2. — As of 3 November 2022, maintenance of competency may be satisfactorily recorded in the operator's records, or in the flight crew or the remote flight crew member's personal log book or license.

Note 3.— As of 3 November 2022, flight crew and remote flight crew members may, to the extent deemed feasible by the State of Registry, or Licensing Authority of the State of the Operator, respectively, demonstrate their continuing competency in FSTDs approved by that State.

Note 4. — See the Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625).

Note 5. — See the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379) for guidance material on the development of a risk assessment process.

(e) Except as provided in this part a Medical Assessment issued in accordance with this Part shall be valid from the date of the medical examination for a period not greater than:

(1) 60 months for the private pilot license — aeroplane, airship, helicopter and powered-lift;

(2) 12 months for the commercial pilot license — aeroplane, airship, helicopter and powered-lift;

(3) 12 months for the multi-crew pilot license — aeroplane;

(4) 12 months for the airline transport pilot license — aeroplane, helicopter and powered-lift;

(5) 60 months for the glider pilot license;

(6) 60 months for the free balloon pilot license;

(7) 12 months for the flight navigator license;

(8) 12 months for the flight engineer license;

(9) 48 months for the air traffic controller license.

Note 1. — The periods of validity listed above may be extended by up to 45 days in accordance with this part.

Note 2.— When calculated in accordance with the above and its sub-paragraphs, the period of validity will, 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.

(f) The period of validity of a Medical Assessment may be reduced when clinically indicated.

(g) When the holders of airline transport pilot licenses — aeroplane, helicopter and powered-lift, and commercial pilot licenses — aeroplane, airship, helicopter and powered-lift, who are engaged in single -crew commercial air transport operations carrying passengers, have passed their 40th birthday, the period of validity specified in (d) shall be reduced to six months.

(h) When the holders of airline transport pilot licenses — aeroplane, helicopter and powered-lift, commercial pilot licenses — aeroplane, airship, helicopter and powered-lift, and multi-crew pilot licenses — aeroplane, who are engaged in commercial air transport operations, have passed their 60th birthday, the period of validity specified in (d) shall be reduced to six months.

(i) Until 2 November 2022, when the holders of private pilot licenses — aeroplane, airship, helicopter and powered-lift, free balloon pilot licenses, glider pilot licenses and air traffic controller licenses have passed their 40th birthday, the period of validity specified in this part shall be reduced to 24 months.

(j) As of 3 November 2022, When the holders of private pilot licenses — aeroplane, airship, helicopter and powered-lift, remote pilot licenses — aeroplane, airship, glider, rotorcraft, powered-lift or free balloon, free balloon pilot licenses, glider pilot licenses and air traffic controller licenses have passed their 40th birthday, the period of validity specified in (d) shall be reduced to 24 months.

(k) Until 2 November 2022, when the holders of private pilot licenses — aeroplane, airship, helicopter and powered-lift, free balloon pilot licenses, glider pilot licenses and air traffic controller licenses have passed their 50th birthday, the period of validity specified in (d) shall be further reduced to 12 months.

(l) As of 3 November 2022, when the holders of private pilot licenses — aeroplane, airship, helicopter and powered-lift, free balloon pilot licenses, glider pilot licenses and air traffic controller licenses have passed their 50th birthday, the period of validity specified (d) shall be further reduced to 12 months.

Note. — The periods of validity listed above are based on the age of the applicant at the time of undergoing the medical examination.

(m) Circumstances in which a medical examination may be deferred. The prescribed re-examination of a license holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Licensing Authority, provided that such deferment shall only be made as an exception and shall not exceed:

(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 favorable medical report is obtained after examination by a designated medical examiner of the area concerned, or, in cases where such a designated medical examiner is not available, by a physician legally qualified to practice medicine in that area. A report of the medical examination shall be sent to the Licensing Authority where the license was issued;

(3) in the case of a private pilot, a single period not exceeding 24 months where the medical examination is carried out by an examiner designated in this part by the Authority in which the applicant is temporarily located. A report of the medical examination shall be sent to the Licensing Authority where the license was issued.

2.2.2 LANGUAGE PROFICIENCY

(a) Until 2 November 2022, aeroplane, airship, helicopter and powered-lift pilots, air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in IS 2.2.2.

(b) As of 3 November 2022, Aeroplane, airship, helicopter and powered-lift pilots; aeroplane, airship, glider, rotorcraft, powered-lift or free balloon remote pilots; air traffic controllers; and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in IS 2.2.2..

(c) Flight engineers, and glider and free balloon pilots shall have the ability to speak and understand the language used for radiotelephony communications.

(d) Flight navigators required to use the radiotelephone aboard an aircraft shall demonstrate the ability to speak and understand the language used for radiotelephony communications.

(e) Flight navigators required to use the radiotelephone aboard an aircraft shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in IS 2.2.2.

(f) Until 2 November 2022, the language proficiency of aeroplane, airship, helicopter and powered-lift pilots, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level.

(g) As of 3 November 2022, The language proficiency of aeroplane, airship, helicopter and powered-lift pilots; aeroplane, airship, glider, rotorcraft, powered-lift or free balloon remote pilots; air traffic controllers; and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level.

(h) Until 2 November 2022, the language proficiency of aeroplane, airship, helicopter and powered-lift pilots; aeroplane, airship, gliders, rotorcraft, powered-lift or free balloon remote pilots; flight navigators required to use the radiotelephone aboard an aircraft; air traffic controllers; and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) 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) should be evaluated at least once every three years; and

(2) those demonstrating language proficiency at the Extended Level (Level 5) should be evaluated at least once every six years.

Note 1. — Formal evaluation is not required for applicants who demonstrate expert language proficiency, e.g. native and very proficient non-native speakers with a dialect or accent intelligible to the international aeronautical community.

Note 2. — The provisions in this part refer to Annex 10, Volume II, Chapter 5, whereby the language used for radiotelephony communications may be the language normally used by the station on the ground or English. In practice, therefore, there will be situations whereby flight crew members and remote flight crew members will only need to speak the language normally used by the station on the ground.

(i) Until 2 November 2022, the language proficiency of aeroplane, airship, helicopter and powered-lift pilots; aeroplane, airship, gliders, rotorcraft, powered-lift or free balloon remote pilots; flight navigators required to use the radiotelephone aboard an aircraft; air traffic controllers; and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) 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) should be evaluated at least once every three years; and

(2) those demonstrating language proficiency at the Extended Level (Level 5) should be evaluated at least once every six years.

Note 1. — Formal evaluation is not required for applicants who demonstrate expert language proficiency, e.g. native and very proficient non-native speakers with a dialect or accent intelligible to the international aeronautical community.

Note 2. — The provisions of 1.2.9 refer to Annex 10, Volume II, Chapter 5, whereby the language used for radiotelephony communications may be the language normally used by the station on the ground or English. In practice, therefore, there will be situations whereby flight crew members and remote flight crew members will only need to speak the language normally used by the station on the ground.

2.2.3 CREDIT FOR MILITARY COMPETENCY

2.2.3.1 Credit for Military Pilots

(a) Pilot licenses. 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;

(1) A rating in the category and class of aircraft for which that military pilot is qualified;

(2) An instrument rating with the appropriate category rating for which that military pilot is qualified; and

(3) A type rating, if appropriate.

(b) The testing required by a military pilot seeking a license 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) Meteorology;

(iii) Operational procedures; and

(iv) Radiotelephony;

(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.

2.2.3.2 Credit for Military Parachute Riggers

(a) The Authority shall grant to an applicant for a senior parachute rigger license that license 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 Liberia, is a civilian employee of a regular armed force of a foreign country, or has, within the 12 months before he applies, been honorably 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 2.10.1.3.

2.2.4 VALIDATION AND CONVERSION OF FOREIGN LICENSES, RATINGS, AUTHORIZATIONS AND CERTIFICATES

2.2.4.1 Validation of Flight crew Licenses

Note: See ICAO Document 9379, Manual of Procedures for Establishment of a State's Personnel Licensing System, Chapter 7: 7.3 and Appendix O for guidance related to validation or conversion.

(a) General requirements for validation.

(1) A person who holds a current and valid pilot license issued by another Contracting State in accordance with ICAO Annex 1 may apply for a validation of such license for use on aircraft registered in Liberia.

(2) The applicant for the validation certificate shall present to the Authority the foreign license 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 license.

(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 license held.

(4) The applicant for the validation certificate shall present to the Authority evidence of language proficiency in the language of Liberia and in English as specified in IS 2.2.2 or shall demonstrate to the Authority the language proficiency skills as specified in IS 2.2.2.

(i) The validation shall be limited for use on Liberia registered aircraft for use within Liberia if the pilot is not proficient in the English language, as required by IS 2.2.2.

(5) Authority will verify the authenticity of the license, ratings authorizations and the medical certificate with the state of license issue prior to issuing the validation.

(6) The Authority will only validate ratings or authorizations on the foreign license together with the validation of a license

(7) The Authority may issue a validation certificate which will be valid for one year, provided the foreign license, ratings or authorizations 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 license 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 license and meet the following requirements:

(1) The applicant for the validation certificate shall demonstrate, to the satisfaction of the Authority and relevant to the license to be validated, knowledge of Liberia's:

(i) Air Law;

(ii) Meteorology;

(iii) Operational procedures; and

(iv) Radiotelephony;

(2) The applicant for the validation certificate shall complete a skill test for the relevant license and ratings that he or she wants to be validated relevant to the privileges of the license held; and

(3) Comply with the experience requirements set out in the table below:

License	Experience	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
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

License	Experience	Validation Privileges
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
MPL(A)	>250 as co-pilot of turbine-powered air transport aeroplanes certificated for operations with a minimum crew of at least two pilots operated in commercial air transport within the past 12 months	Commercial air transport in turbine -powered air transport aeroplanes certificated for operations with a minimum crew of at least two pilots as co-pilot
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 1: The term multi-pilot is used to indicate experience in an aircraft required to be operated with a co-pilot. (For example, see ICAO Annex 1: 2.6.1.3.1.).

Note 2: > = greater than

2.2.4.2 Conversion of Flightcrew Licenses

(a) Conversion of a foreign pilot license for issuance of a PPL by Liberia. A person who holds a current and valid pilot license 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 Liberia provided the following requirements are met.

(1) The holder shall:

(i) present to the Authority the foreign license, evidence of experience required by presenting the record (e.g. logbook) and current medical certificate;

(ii) present to the Authority evidence of language proficiency in the language of Liberia and in English as specified in IS 2.2.2 or shall demonstrate to the Authority the language proficiency skills as specified in IS 2.2.2;

(iii) obtain a Class 2 medical certificate issued under this Part;

(iv) demonstrate, to the satisfaction of the LCAA and relevant to the license to be converted, knowledge of Liberia's:

(A) Air Law;

(B) Meteorology;

(C) Operational Procedures; and

(D) Radiotelephony.

(v) complete a PPL skill test.

(2) The Authority will verify the authenticity of the license, ratings, authorizations and the medical certificate with the state of license issue prior to converting the license.

(b) Conversion of PPL/IR, CPL, CPL/IR, MPL, ATPL and Flight Engineer licenses, which have been validated in accordance with paragraph 2.2.4.1.

(1) The holder of a current and valid foreign CPL, CPL/IR, MPL, ATPL or Flight Engineer license issued by another Contracting State in accordance with ICAO Annex 1, and appropriate medical certificate, may apply for conversion to the appropriate license and ratings issued by Liberia provided the following requirements are met:

(i) The applicant is the holder of a current validation certificate issued under 2.2.4.1;

(ii) The applicant has completed 200 flight hours in a Liberia registered aircraft which is operated by an operator established in Liberia exercising the privileges granted by the validation certificate,

(iii) The applicant for the conversion shall present to the Authority the foreign license and evidence of the 200 flight hours by presenting the record (e.g. logbook); and

(iv) The applicant shall hold or obtain a medical certificate issued under this Part, appropriate to the level of license to be converted.

(v) Ratings listed on a person's foreign pilot license that have been validated in accordance with paragraph 2.2.4.1, may be placed on that person's converted license.

(2) The holder of a current and valid foreign PPL/IR issued by another Contracting State in accordance with ICAO Annex 1, and appropriate medical certificate, may apply for conversion to the appropriate license and ratings issued by Liberia provided the following requirements are met:.

(i) The applicant is the holder of a current validation certificate issued under 2.2.4.1;

(ii) The applicant has completed 75 flight hours in a Liberia registered aircraft in Liberia exercising the privileges granted by the validation certificate,

(iii) The applicant for the conversion shall present to the Authority the foreign license and evidence of the 75 flight hours by presenting the record (e.g. logbook); and

(iv) The applicant shall hold or obtain a medical certificate issued under this Part, appropriate to the level of license to be converted.

(v) Ratings listed on a person's foreign pilot license that have been validated in accordance with paragraph 2.2.4.1, may be placed on that person's converted license.

(3) The holder of a current and valid foreign PPL/IR issued by another Contracting State in accordance with ICAO Annex 1, and appropriate medical certificate, may apply for conversion to the appropriate license and ratings issued by Liberia provided the following requirements are met:.

(i) The applicant is the holder of a current validation certificate issued under 2.2.4.1;

(ii) The applicant has completed 75 flight hours in a Liberia registered aircraft in Liberia exercising the privileges granted by the validation certificate,

(iii) The applicant for the conversion shall present to the Authority the foreign license and evidence of the 75 flight hours by presenting the record (e.g. logbook); and

(iv) The applicant shall hold or obtain a medical certificate issued under this Part, appropriate to the level of license to be converted.

(v) Ratings listed on a person's foreign pilot license that have been validated in accordance with paragraph 2.2.4.1, may be placed on that person's converted license.

2.2.4.3 Validation of Flightcrew Licenses by Reliance upon the Licensing System of another Contracting State

(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 license and current medical certificate, provided:

(1) the license is issued by another ICAO Contracting State;

(2) the Authority is convinced that the license 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 licenses and, if applicable, keeping the licenses and ratings current and valid; and

(4) the applicant for the validation certificate shall demonstrate, to the satisfaction of the Liberia Civil Aviation Authority and relevant to the license, knowledge of Liberia's:

(i) Air law;

(ii) Meteorology;

(iii) Operational procedures; and

(iv) Radiotelephony.

(b) The applicant for the validation certificate shall present to the Authority the:

(1) Foreign license and evidence of the currency of the license by presenting the record (e.g. logbook).

(2) Medical certificate relevant to the license to be validated, provided that the foreign medical certificate meets the requirements of Part 2.

(3) Evidence of language proficiency in the language of Liberia and 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 license, ratings, authorizations and the medical certificate with the State of License issue prior to issuing the validation.

(d) The Authority may issue a validation certificate which will be valid for one year, provided the foreign license, ratings, authorizations and medical certificate remains valid.

(e) The IS 2.2.4.3 contains procedures for validation of flight crew licenses by reliance upon the licensing system of another ICAO Contracting State.

2.2.4.4 Conversion of Flightcrew Licenses by Reliance upon the Licensing System of another Contracting State

(a) Notwithstanding paragraphs 2.2.4.1 and 2.2.4.2, the Authority may issue a license with the applicable ratings to the holder of a current and valid foreign license, provided:

(1) the license is issued by another ICAO Contracting State;

(2) the Authority is convinced that the license 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 licenses.

(b) The applicant for the conversion shall present to the Authority the:

(1) foreign license and evidence of the currency of the license by presenting the record (e.g. logbook);

(2) medical certificate relevant to the license if the medical certificate is to be converted or medical certificate issued under Part 2 relevant to the license sought; and

(3) Evidence of language proficiency in the language of Liberia and in English as specified in paragraph IS 2.2.2 or shall demonstrate to the Authority the language skills as specified in paragraph IS 2.2.2.

(c) The applicant shall demonstrate, to the satisfaction of the LCAA and relevant to the license to be converted, the knowledge of Liberia's:

(1) Air law;

(2) Meteorology;

(3) Operational procedures;

(4) Radiotelephony.

(d) The authority will verify the authenticity of the license, ratings, authorizations and the medical certificate with the State of License issue prior to issuing the license.

(e) The IS 2.2.4.4 contains procedures conversion of flight crew licenses by reliance upon the licensing system of another ICAO Contracting State.

2.2.4.5 Validation in Case of Leased, Chartered or Interchanged Aircraft

(a) The requirements stated in 2.2.4.1 shall not apply where aircraft, registered in Liberia 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 technical and/or operational supervision in accordance with Art. 83 bis of the ICAO Convention.

(b) The licenses of the flight crew of the other Contracting State may be validated, provided that the privileges of the flight crew license validation are restricted for use during the lease, charter or interchange period only on nominated aircraft in specified operations not involving a Liberia operator, directly or indirectly through a wet lease or other commercial arrangement.

(c) The Authority will verify the authenticity of the license, ratings, authorizations, including the English language proficiency endorsement of at least Level 4, and the medical certificate, with the State of License issue prior to issuing the validation.

2.2.4.6 Temporary Validation of Non-Liberia Pilot Licenses Held by Manufacturer Pilots

(a) In circumstances where validation of a non- Liberia pilot license is needed to fulfill specific tasks of finite duration, the Authority may issue a temporary validation of such a license 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 license issued by another ICAO Contracting State in accordance with the provisions of ICAO Annex 1, including an instructor rating or examiner authorization issued by that State, provided that the holder of the license shall:

(1) Possess an appropriate license, medical certificate, type ratings and qualifications, to include instructor or examiner qualifications, valid in the State of license issue for the duties proposed;

(2) Demonstrate, to the satisfaction of the Liberia Civil Aviation Authority and relevant to the license to be validated, knowledge of Liberia's:

(i) Air law;

(ii) Meteorology;

(iii) Operational Procedures; and

(iv) Radiotelephony.

(3) Provide evidence of language proficiency in the language of Liberia and 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.

(4) Be employed by an aircraft manufacturer or Approved Training Organization located outside Liberia performing training on behalf of an aircraft manufacturer; and

(5) 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 Liberia, delivery or ferry flights, initial line flying, flight demonstrations or test flights.

(c) Whenever conducting or supervising line flying, the pilot shall also be required to meet the relevant requirements of Part 8.

(d) Liberia will verify the authenticity of the license, ratings, authorizations and medical certificate with the State of license issue prior to issuing the temporary validation.

(e) The duration of the temporary validation shall be for one year.

2.2.4.7 Validation of Aircraft Maintenance Technician Licenses

(a) General requirements for validation.

(1) A person who holds a current and valid AMT license issued by another Contracting State, in accordance with ICAO Annex 1, may apply for a validation of such license for use on aircraft registered in Liberia.

(2) The applicant for the validation certificate shall present to the Authority the foreign license 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 language proficiency in the language of Liberia and if required, in English.

(4) Authority will verify the authenticity of the license, ratings authorizations with the state of license issue prior to issuing the validation.

(5) The Authority will only validate ratings or authorizations on the foreign license together with the validation of a license

(6) The Authority may issue a validation certificate which will be valid for one year, provided the foreign license, ratings or authorizations remains valid.

(b) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority the knowledge relevant to the license to be validated of:

(1) Air Law;

(2) Applicable Airworthiness requirements governing certification and continuing airworthiness; and

(3) Approved maintenance organizations and procedures.

(c) The applicant for the validation certificate shall complete a skill test for the relevant license and ratings that he or she wants to be validated relevant to the privileges of the license held; and

(d) Have a minimum of four years AMT experience.

2.2.4.8 Conversion of Aircraft Maintenance Technician Licenses

(a) General requirements for conversion. A person who holds a current and valid AMT license issued by another Contracting State, in accordance with ICAO Annex 1, may apply for conversion of such license for use on aircraft registered in Liberia provided the following requirements are met:

(1) The applicant for the conversion shall present to the Authority the foreign license and evidence of the experience required by presenting the personal record.

(2) The applicant for the conversion shall demonstrate to the Authority evidence of language proficiency in the language of Liberia and if required, in English.

(3) Demonstrate, to the satisfaction of the LCAA and relevant to the license to be converted, knowledge of Liberia's:

(i) Air Law;

(ii) Applicable Airworthiness requirements governing certification and continuing airworthiness;

(iii) Approved maintenance organizations and procedures.

(4) The applicant for the validation certificate shall complete a skill test for the relevant license and ratings that he or she wants to be converted relevant to the privileges of the license held; and

(5) Have a minimum of four years AMT experience.

(i) The LCAA will verify the authenticity of the license, ratings and authorizations with the state of license issue prior to issuing the converted license.

(ii) The LCAA will only convert ratings or authorizations on the foreign license together with the conversion of a license.

(b) Conversion of AMT licenses that have been validated in accordance with 2.2.4.7. The holder of a current and valid AMT license 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 Liberia may convert his/her AMT license with no further formality.

2.2.4.9 Validation of AMT Licenses by Reliance upon the Licensing System of Another Contracting State

(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 AMT, provided:

(1) the license is issued by another ICAO Contracting State;

(2) the Authority had determined that the license 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 licenses and, if applicable, keeping the licenses and ratings current and valid; and

(4) the applicant for the validation certificate demonstrates, to the satisfaction of the Liberia Civil Aviation Authority and relevant to the license to be validated, knowledge of Liberia's

(i) Air law;

(ii) Applicable Airworthiness requirements governing certification and continuing airworthiness; and

(iii) Approved maintenance organizations and procedures.

(5) The applicant for the validation certificate shall present to the Authority the:

(i) Foreign license and evidence of the currency of the license by presenting the personal record.

(6) The applicant for the validation shall demonstrate to the Authority evidence of language proficiency in the language of Liberia and if required, in English.

(b) The authority will verify the authenticity of the license, ratings, with the State of License issue prior to issuing the validation.

(c) The Authority may issue a validation certificate which will be valid for one year, provided the foreign license, ratings, and authorizations remain valid.

(d) The IS 2.2.4.9 contains procedures for validation of AMT licenses by reliance upon the licensing system of another ICAO Contracting State.

2.2.4.10 Conversion of AMT Licenses by Reliance upon the Licensing System of Another Contracting State

(a) Notwithstanding paragraphs 2.2.4.7 and 2.2.4.8, the Authority may issue a license with the applicable ratings to the holder of a current and valid foreign license, provided:

(1) the license is issued by another ICAO Contracting State;

(2) the Authority is convinced that the license 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 licenses.

(b) The applicant for the conversion shall present to the Authority the:

(1) Foreign license; and

(2) Evidence of the currency of the license by presenting the personnel record (e.g. logbook).

(c) The applicant for the conversion shall demonstrate to the Authority evidence of language proficiency in the language of Liberia and if required, in English.

(d) The applicant shall demonstrate, to the satisfaction of the LCAA and relevant to the license to be converted knowledge of Liberia's:

(1) Air law;

(2) Applicable airworthiness requirements governing certification and continuing airworthiness; and;

(3) Approved maintenance organizations and procedures.

(e) The authority will verify the authenticity of the license, ratings, authorizations and the medical certificate with the State of License issue prior to issuing the validation.

(f) The IS 2.2.4.10 contains procedures conversion of AMT licenses by reliance upon the licensing system of another ICAO Contracting State.

2.2.5 TRAINING AND TESTING REQUIREMENTS

2.2.5.1 Documentation of Training and Aeronautical Experience

(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 license, rating, endorsement and/or authorization of Part 2; and

(2) The experience required to show the maintaining of recency of aeronautical experience according to the requirements of Part 2.

2.2.5.2 Approved Training and Approved Training Organization

Note. — The qualifications required for the issue of personnel licenses can be more readily and speedily acquired by applicants who undergo closely supervised, systematic and continuous courses of training, conforming to a planned syllabus or curriculum. Provision has accordingly been made for some reduction in the experience requirements for the issue of certain licenses and ratings prescribed in these Standards and Recommended Practices, in respect of an applicant who has satisfactorily completed a course of approved training.

(a) 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.

(b) The approval of a training organization by the Authority shall be dependent upon the applicant demonstrating compliance with the requirements of LCAR Part 3 to and the relevant provisions contained in Annex 19.

Note 1.— Annex 19 includes safety management provisions for an approved training organization that is exposed to safety risks related to aircraft operations during the provision of its services. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

Note 2. — Guidance on approval of a training organization can be found in the Manual on the Approval of Training Organizations (Doc 9841).

(c) Approved training for flight crew and air traffic controllers shall be conducted within an approved training organization.

Note. — The approved training considered in (c) relates primarily to approve training for the issuance of an Annex 1 license or rating. It is not intended to include approved training for the maintenance of competence or for an operational qualification after the initial issuance of a license or rating, as may be required for air traffic controllers or for flight crew, such as the approved training under Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, 9.3, or Part III — International Operations — Helicopters, Section II, 7.3.

(d) Until 2 November 2022, competency-based approved training for aircraft maintenance personnel shall be conducted within an approved training organization.

Note.— A comprehensive training scheme for the aircraft maintenance (technician/engineer/mechanic) license, including the various levels of competency, is contained in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG).

(e) As of 3 November 2022, competency-based approved training for aircraft and RPAS maintenance personnel shall be conducted within an approved training organization.

Note.— A comprehensive training scheme for the aircraft maintenance (technician/engineer/mechanic) license, including the various levels of competency, is contained in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG).

(f) As of 3 November 2022, competency-based approved training for remote flight crew shall be conducted within an approved training organization.

(g) Competency-based approved training for flight operations officer/flight dispatcher personnel shall be conducted within an approved training organization.

Note.— Procedures supporting the development of competency-based training and assessment for aeroplane flight crew, air traffic controllers, aircraft maintenance personnel, remote flight crew and flight operations officers/flight dispatchers, including ICAO competency frameworks, are contained in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG).

2.2.5.3 Use of Flight Simulation Training Devices

(a) The use of a FSTD for acquiring the experience or performing any manoeuvre required during the demonstration of skill for the issue of a license or rating shall be approved by the Licensing Authority, which shall ensure that the flight simulation training device used is appropriate to the task.

(b) Except as specified in paragraph (c) 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—

(c) The training, testing, and checking for which it is used;

(d) Each particular manoeuvre, procedure, or crewmember function performed; and

(e) 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.

(f) 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.

(g) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.

(h) Operators that have standard instruments shall use simulators that have standard instruments.

(i) Operators shall not conduct differences training on variant training on aircraft that have electronic glass displays with aircraft that have standard instruments.

(j) The Authority may approve a device other than a flight simulation training device for specific purposes.

(k) The use of a flight simulation training device 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 flight simulation training device is appropriate to the task.

Note: See ICAO Doc 9625, Manual of Criteria for the Qualification of Flight Simulation Training Devices.

2.2.5.4 Knowledge and Skill Tests and Checks: Time, Place, Designated Persons and Format

(a) Knowledge and Skill Tests and Checks prescribed by or under Part 2 are given at times, places, and by persons authorized and designated by the Authority.

(b) The knowledge test will be performed in written or computer format, except for the knowledge test for an instructor license 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.

2.2.5.5 Knowledge and Skill Tests and Checks—Prerequisites, Passing Grades and Retesting After Failure

(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 license, rating or authorization to show that the applicant has met the training and/or experience requirements to take the knowledge or skill test.

Note: The endorsement requirements may differ between licenses and will appear in each license section in Part 2 as applicable.

(b) An applicant for a knowledge or skill test shall receive written authorization 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 license 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 will specify the minimum passing grades.

(e) An applicant shall, before attempting the skill test for a license 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 has 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; and

(f) When an applicant is required to provide an aircraft for a skill test, it must:

(1) be airworthy and certificated;

(2) be capable of performing all areas of operation appropriate to the rating sought and have no operating limitations, which prohibit its use in any of the areas of operation, required for the skill test.

(3) not have operating limitations that prohibit the tasks required for the skill test,

(4) be of national, foreign or military registry of the same category, class, and type if applicable, for the license and/or rating for which the applicant is applying, with appropriate letter of authorization for aircraft use in a skill test if applicant is not the owner of the foreign registered or military aircraft;

(5) have

(i) fully functioning dual controls;

(ii) at least two pilot stations with adequate visibility for each person to operator the aircraft safety;

(iii) cockpit and outside visibility adequate to evaluate the performance of the applicant when an additional jump seat is provided for the examiner.

(g) If the applicant is required to take a segmented skill test using a flight simulation training device and an aircraft, the flight simulation training device must be approved by the authority.

(h) 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:

(2) The necessary training from an authorized instructor who has determined that the applicant is proficient to pass the test; and

(3) An endorsement from an authorized instructor who gave the applicant the additional training.

(4) An applicant for a flight instructor license with an aeroplane category rating or, for a flight instructor license 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—

(5) Comply with the requirements of paragraph (f)(1) of this subsection before being retested;

(6) Bring an aircraft to the retest that is of the appropriate aircraft category for the rating sought and is certified for spins; and

(7) Demonstrate satisfactory instructional proficiency on stall awareness, spin entry, spins, and spin recovery to an examiner during the retest.

2.2.5.6 Reliance on Training and Testing in another Contracting State

(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 licenses 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

2.2.6 INSTRUCTOR REQUIREMENTS—GENERAL

(a) All applicants for instructor licenses and ratings or authorizations shall, in addition to specific requirements contained in this Part, have received and logged training from an authorized 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 program 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 license or authorization 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 authorizes 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 DESIGNATED EXAMINERS

(a) The Authority may designate private individuals to act as representatives of the Director General of Civil Aviation] in examining, inspecting, and testing persons and aircraft for the purpose of issuing airmen and aircraft licenses, ratings and certificates.

(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 SPECIFICATIONS FOR PERSONNEL LICENSES

(a) Personnel licenses issued by the Authority in accordance with the relevant provisions of this part shall conform to the following specifications:

(b) Detail

(1) The Authority having issued a license shall ensure that other States are able to easily determine the license privileges and validity of ratings.

(2) The items required on the license are indicated in (3) below.

Note.— Operator records or a flight crew member's personal log book, in which maintenance of competency and recent experience may be satisfactorily recorded, are not normally carried on international flights.

(3) The following details shall appear on the license:

(i) Name of State (in bold type);

(ii) Title of license (in very bold type);

(iii) Serial number of the license, in Arabic numerals, given by the authority issuing the license;

(iv) Name of holder in full (in Roman alphabet also if script of national language is other than Roman);

(Iv a) Date of birth;

(v) Address of holder if desired by the State;

(vi) Nationality of holder;

(vii) Signature of holder;

(viii) Authority and, where necessary, conditions under which the licensees issued;

(ix) Certification concerning validity and authorization for holder to exercise privileges appropriate to license;

(x) Signature of officer issuing the license and the date of such issue;

(xi) Seal or stamp of authority issuing the license;

(xii) Ratings, e.g. category, class, type of aircraft, airframe, aerodrome control, etc.;

(xiii) Remarks, i.e. special endorsements relating to limitations and endorsements for privileges, including an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention; and

(xiv) Any other details desired by the State issuing the license.

(c) **Material:** First quality paper or other suitable material, including plastic cards, shall be used and the items mentioned in (3) above shown clearly thereon.

(d) **Language:** When licenses are issued in a language other than English, the license shall include an English translation of at least items I), II), VI), IX), XII), XIII) and XIV). When provided in a language other than English, authorizations issued in accordance with (3) above shall include an English translation of the name of the State issuing the authorization, the limit of validity of the authorization and any restriction or limitation that may be established.

(e) **Arrangement of items:** Item headings on the license shall be uniformly numbered in roman numerals as indicated in (3) above, so that on any license the number will, under any arrangement, refer to the same item heading.

Note. — Item headings may be arranged in such order as may best suit the convenience of the Contracting State issuing the license.

(f) The items required on the license are indicated in IS 2.2.8.

(g) The license shall contain the expiration date of the license and ratings.

2.2.9 SUSPENSION OR REVOCATION OF A LICENCE, RATING, AUTHORISATION OR CERTIFICATE

Note 1: See also Part 1: Section 1.3.

Note 2: The application of suspension or revocation of a license, etc., will vary from State to State depending on the legal structure of the State.

2.2.9.1 Suspension of a License, Rating Authorization or Validation Certificate

(a) If, in accordance with the [Aviation Statute/ Section 610 of the Model Law] the Authority determines that the interests of safety require that a license, rating, authorization or certificate must be suspended, the Authority may act as follows:

(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, authorization, or validation certificate to retake all or part of the knowledge or practical tests required for any license, rating, authorization, or validation certificate at issue, renewal or re-issue. The Authority may suspend the validity of any such license, rating, authorization and/or validation certificate pending the results of such re-testing.

(2) A person whose license, rating, authorization, 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, authorization 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 authorization. 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 authorization at issue indicated in (a);

(ii) If the person involved has gained the required additional experience; or

(iii) By revocation of the license, rating, authorization 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.

2.2.9.2 Suspension of a Medical Certificate

(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 favorable 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 will 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 8 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.

2.2.9.3 Revocation of Licenses, Ratings Authorizations or Certificates

(a) A license, rating, authorization 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 license, rating, authorization and/or certificate may be revoked if the holder has made a statement contrary to the truth in obtaining or maintaining that license, rating authorization or certificate, or has provided incorrect data at a medical examination and/or test required for the issue, maintenance or renewal of the license, rating, authorization and certificate.

(c) A license, rating, authorization or certificate shall be revoked in case of proven misconduct, recklessness or excessive carelessness. The holder of the license will be notified in writing of the revocation with the reasons therefore.

(d) A person who has had a license or certificate revoked shall be obliged to hand over to the Authority all the licenses 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 judgment of a court, shall be equally obliged to hand over to the Authority all licenses and certificates in his or her possession within 8 days after he or she has taken cognizance of the judgment or after it can be reasonably assumed that he or she has taken cognizance thereof.

2.3 PILOT LICENCES, CATEGORIES, RATINGS, AUTHORISATIONS, ENDORSEMENTS, INSTRUCTORS FOR PILOT LICENSING, AND DESIGNATED PILOT EXAMINERS

2.3.1 GENERAL

2.3.1.1 Applicability

(a) This Section prescribes the requirements for the issue, renewal and re-issue, if applicable, of pilot licenses, ratings and authorizations.

2.3.1.2 General Rule Concerning Licenses, Ratings and Authorizations

(a) An applicant shall, before being issued with any pilot license, rating, authorization or designation, meet such requirements in respect of age, knowledge, experience, flight instruction, skill, medical fitness and language proficiency as are specified for that license, rating or authorization.

(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 license issued in accordance with the provisions of Part 2.

(c) An applicant shall for renewal or re-issue of a license, rating, authorization or designation, meet the requirements as are specified for that license, rating, authorization or designation.

2.3.1.3 Crediting of Flight Time

(a) A student pilot or the holder of a pilot license shall be entitled to be credited in full with all solo, dual instruction and pilot-in-command flight time towards the total flight time required for the initial issue of a pilot license or the issue of a higher grade of pilot license.

(b) The holder of a pilot license, when acting as co-pilot at a pilot station of an aircraft certificated for operation by a single pilot but required by the Authority 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 license. The Authority may authorize 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 license, 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 license.

(d) The holder of a pilot license, when acting as pilot-in-command 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 license.

2.3.1.4 Limitation of Privileges of Pilots Who Have Attained Their 60th Birthday and Curtailment of Privileges of Pilots Who Have Attained Their 65th Birthday

The Authority, having issued pilot licenses, shall not permit the holders thereof to act as pilot of an aircraft engaged in international commercial air transport operations if the license holders have attained their 60th birthday or, in the case of operations with more than one pilot, their 65th birthday.

Note. — Attention is drawn to 2.2.5 (g) on the validity period of Medical Assessments for pilots over the age of 60 who are engaged in commercial air transport operations.

2.3.1.5 Recent Experience and Proficiency Requirements Non-Commercial Air Transport Operations

Note: For commercial air transport operations, see LCAR 8: 8.4.

(a) In order to maintain recency and proficiency, all pilots shall meet the applicable requirements in (b) — (g) below.

(b) 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 LCAR 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 license;

(3) A proficiency check in the appropriate aircraft for the license, ratings or authorizations held, unless within the past 24 months, the pilot has satisfactorily completed one of the following --

(i) A pilot proficiency check or practical test conducted by an authorized CAA examiner, for a pilot certificate, rating, or operating privilege.

(ii) A practical test conducted by an authorized CAA 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 authorized 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.

(c) 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 an authorized representative of the Authority.

(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.

(d) 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 an authorized 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.

(e) Recency for Carriage of Passengers. No person may act as PIC or co-pilot of an aircraft carrying passengers unless, 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 six months:

(1) The pilot had an instrument proficiency check on the manoeuvres 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 authorized representative of the Authority

2.3.1.6 Recording of Flight Time

(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:

(b) Training and experience used to meet the requirements for a license, rating and authorization of Part 2; and

(c) 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

2.3.2.1 General

(a) The holder of a pilot license shall not be permitted to act as PIC or as co-pilot of an aircraft unless the holder has received the applicable ratings, authorizations 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 authorization 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, authorization or endorsement sought.

(c) When an applicant demonstrates skill and knowledge for the initial issue or re-issue of a pilot license, the category and ratings appropriate to the class or type of aircraft used in the demonstration will be entered on the license.

(d) For the purpose of training, testing or specific special purpose non-revenue, non-passenger carrying flights, special authorization may be provided in writing to the license holder by the Authority in place of issuing the class or type rating in accordance with (a). This authorization shall be limited in validity to the time needed to complete the specific flight.

2.3.2.2 Category Ratings

(a) When established, category ratings shall be for categories of aircraft listed in 2.3.1 (a).

(b) Category ratings shall not be endorsed on a license when the category is included in the title of the license itself.

(c) Any additional category rating endorsed on a pilot license shall indicate the level of licensing privileges at which the category rating is granted.

(d) The holder of a pilot license seeking additional category ratings shall meet the requirements of this Part appropriate to the privileges for which the category rating is sought.

(e) The category of aircraft shall be endorsed on the license as a rating.

(f) Initial category rating.

(1) An applicant for a pilot's license, after successfully meeting all requirements for the issuance of the license as contained in this Part, shall receive the appropriate license with the aircraft category, and if applicable, class or type rating endorsed on the license.

(g) Additional category ratings.

(1) Any additional category rating endorsed on a pilot license shall indicate the level of licensing privileges at which the category rating is granted.

(2) The holder of a pilot license 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 authorized 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.

(h) 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.

(i) The validity, renewal or reissue of the category rating will coincide with the requirements for validity, renewal or reissue of the license, and if applicable class or type rating contained in this Part.

2.3.2.3 Class Ratings

(a) Class ratings shall be established for aeroplanes certificated for single-pilot operation and shall comprise:

(1) single-engine, land;

(2) single-engine, sea;

(3) multi-engine, land;

(4) multi-engine, sea.

Note. — The provisions of this paragraph do not preclude the establishment of other class ratings within this basic structure.

(b) The Authority shall consider establishing a class rating for those helicopters and powered-lifts certificated for single-pilot operations and which have comparable handling, performance and other characteristics.

(c) Additional class ratings.

(1) Any additional class rating endorsed on a pilot license shall indicate the level of licensing privileges at which the class rating is granted.

(1) The holder of a pilot license seeking an additional class rating shall:

(2) Meet the requirements of this Part appropriate to the privileges for which the class rating is sought;

(3) Have an endorsement is his/her logbook or training record from an authorized instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;

(4) Pass the required knowledge test unless the applicant holds a class rating within the same category of aircraft, at the same level of pilot license at either the private or commercial levels; and

(5) 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 Timeframe

(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 license, 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 license, 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 authorized 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.

2.3.2.4 Type Ratings

(a) Type ratings shall be established for:

(1) aircraft certificated for operation with a minimum crew of at least two pilots;

(2) helicopters and powered-lifts certificated for single-pilot operation except where a class rating has been issued under (a) above; and

(3) any aircraft whenever considered necessary by the Licensing Authority.

Note 1. — Where a common type rating is established, it shall be only for aircraft with similar characteristics in terms of operating procedures, systems and handling.

Note 2. — Requirements for class and type ratings for gliders and free balloons have not been determined.

(b) When an applicant demonstrates skill and knowledge for the initial issue of a pilot license, the category and the ratings appropriate to the class or type of aircraft used in the demonstration shall be entered on the license.

2.3.2.5 Circumstances in Which Class and Type Ratings Are Required

(a) The Authority shall having issued a pilot license shall not permit the holder of such license to act either as pilot-in-command or as co-pilot of an aeroplane, an airship, a helicopter or a powered-lift unless the holder has received authorization as follows:

(1) the appropriate class rating specified in this part; or

(2) a type rating when required in accordance with the provisions in this part.

(b) 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 the flight, such limitation shall be endorsed on the rating.

(c) For the purpose of training, testing, or specific special purpose non-revenue, non-passenger carrying flights, special authorization may be provided in writing to the license holder by the Licensing Authority in place of issuing the class or type rating in accordance with (a). This authorization shall be limited in validity to the time needed to complete the specific flight.

2.3.2.6 Requirements for the issue of class and type ratings

(a) Class Rating

The applicant shall have demonstrated a degree of skill appropriate to the license in an aircraft of the class for which the rating is sought.

2.3.2.7 Type Rating as required in (2.3.2.4 (1))

(a) 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 manoeuvres during all phases of flight;

(ii) abnormal and emergency procedures and manoeuvres 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) for the issue of an aeroplane category type rating, upset prevention and recovery training; and

Note 1. — Procedures for upset prevention and recovery training are contained in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868).*

Note 2. — Guidance on upset prevention and recovery training is contained in the Manual on Aeroplane Upset Prevention and Recovery Training *(Doc 10011).*

Note 3. — The Manual of Criteria for the Qualification of Flight Simulation Training Devices *(Doc 9625) provides guidance on the approval of flight simulation training devices for upset prevention and recovery training.*

Note 4. — The aeroplane upset prevention and recovery training may be integrated in the type rating program or be conducted immediately after, as an additional module.

(v) procedures for crew incapacitation and crew coordination including allocation of pilot tasks; crew cooperation and use of checklists;

Note. — Attention is called to the qualifications required for pilots giving flight training in this part.

(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 license level, an extent of knowledge determined by the Licensing Authority on the basis of the requirements specified *in this part.*

Note. — See the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379) for guidance of a general nature on cross-crew qualification and cross-credit.

(b) Type Rating as required in (2.3.2.4 (2) and(3))

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) The type rating shall be endorsed on the license as a rating, including any limitations.

(d) A pilot seeking an aircraft type rating to be added on a pilot license shall:

(1) Have received training form an authorized instructor in the applicable type of aircraft and/or approved flight simulation training device, the following:

(i) Normal flight procedures and manoeuvres during all phases of flight;

(ii) Abnormal and emergency procedures and manoeuvres 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; and

(v) For the issue of an aeroplane category type rating, upset prevention and recovery training.

(2) Hold or concurrently obtain an instrument rating that is appropriate to the aircraft category, class or type rating sought;

(3) Have an endorsement in his or her logbook or training record from an authorized instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;

(4) Pass the required skill test at the ATPL level, applying crew resource management concepts, applicable to the aircraft category, class and type rating being sought;

(i) Applicants seeking a private or commercial license in an aircraft that requires a type rating shall also complete the applicable portions of either the PPL or CPL skill test in conjunction with the ATPL skill test.

(5) Perform the skill test under instrument flight rules unless the aircraft used for the skill test is not capable of the instrument manoeuvres and procedures required for the skill test in which case the applicant may:

(i) Obtain a type rating limited to "VFR only," and

(ii) Remove the "VFR only" limitation for each aircraft type in which the applicant demonstrates compliance with the ATPL skill test under instrument conditions.

(e) 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.

(f) Validity. Subject to compliance with the requirements in this Part, the validity period of a type rating is 1 calendar year.

(g) 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.

(h) Re-issue. If the type rating has been expired the applicant shall:

(1) Have received refresher training from an authorized 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.

2.3.2.8 Category II and III Authorization

(a) The Authority will issue a Category II or Category III pilot authorization by letter, to accompany the pilot's license, when the pilot meets the requirements contained in paragraph and IS 2.3.2.5.

(b) General.

(3) 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 authorization for that category, class or type of aircraft.

(4) The applicant for a Category II or III pilot authorization shall:

(5) Hold a pilot license with an instrument rating or an ATPL; and

(6) Hold a category and class or type rating for the aircraft for which the authorization is sought.

(c) Knowledge. The applicant for a Category II or III pilot authorization 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 authorization 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 authorization 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 authorization 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 authorization is 6 months.

(h) Renewal. For the renewal of a Category II or III pilot authorization 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 authorized 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.

2.3.2.9 Complex Aeroplane Endorsement

(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 authorized 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 authorized instructor who certifies that person is proficient to operate a high performance aeroplane.

2.3.2.10 High Performance Aeroplane Endorsement

(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 authorized 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 authorized instructor who certifies that person is proficient to operate a complex aeroplane.

2.3.2.11 High Altitude Aircraft Endorsement

(a) No person shall act as pilot in command of a pressurized 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 authorized 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.

(b) Received and logged flight training from an authorized 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 pressurized 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 depressurizing the aircraft; and

(iii) Emergency descent procedures.

2.3.2.12 Night Vision Goggles Endorsement

(a) No person shall act as pilot of an aircraft using night vision goggles, unless the person has received training from an authorized 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) Aero medical 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 goggle 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 authorized 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 LCAR 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

(a) A student pilot shall meet requirements prescribed by the Authority concerned. In prescribing such requirements, the Authority shall ensure that the privileges granted would not permit student pilots to constitute a hazard to air navigation.

(b) A student pilot shall not fly solo unless under the supervision of, or with the authority of, an authorized flight instructor.

(c) A student pilot shall not fly solo in an aircraft on an international flight unless by special or general arrangement between the Authorities concerned.

(d) Medical fitness: the Authority shall not permit a student pilot to fly solo unless that student pilot holds a current Class 2 Medical Assessment.

2.3.3.1 General Requirements

(a) Age. The applicant for a student pilot authorization shall be not less than 16 years of age.

Note: The age limit has been chosen arbitrarily.

(b) Knowledge. The applicant for a student pilot authorization shall receive and log ground training from an authorized 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 authorized 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, a licensed flight instructor, and

(3) In international flight unless there is a special or general arrangement between Liberia and the intended State of flight.

(e) Medical fitness

(1) The Authority shall not permit a student pilot to fly solo unless that student pilot holds a current Class 2 Medical Assessment.

2.3.3.2 Student Pilot Manoeuvres and Procedures for Pre-Solo Flight Training—Aeroplane Category

(a) An applicant for a student pilot authorization 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 authorization 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 authorization 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 authorization 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 authorization 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 authorization 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

2.3.4.1 General Requirements

(a) General requirements for the issue of the license appropriate to the aeroplane, airship, helicopter and powered-lift categories

(b) Age.

(1) The applicant shall be not less than 17 years of age.

(c) Knowledge

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a private pilot license and appropriate to the category of aircraft intended to be included in the license, in at least the following subjects:

(i) Air law

(ii) rules and regulations relevant to the holder of a private pilot license; rules of the air; altimeter setting procedures; appropriate air traffic services practices and procedures;

(iii) 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;

(2) Flight performance and planning:

(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;

(3) Human performance:

(i) human performance including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual *(Doc 9683).*

(4) Meteorology:

(i) application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry; hazardous weather conditions;

(5) Navigation:

(i) practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

(6) Operational procedures:

(i) application of threat and error management to operational performance;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(7) Altimeter setting procedures.

(8) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations.

(9) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards.

(10) In the case of the helicopter, and if applicable, powered lift, settling with power; ground resonance; retreating blade stall; dynamic roll-over and other operation hazards; safety procedures, associated with flight in visual meteorological conditions (VMC).

(11) Principles of flight:

(i) Principles of flight.

(12) Radiotelephony:

(i) Communications procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.

(d) Skill:

(1) The applicant shall have demonstrated the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres described in this part with a degree of competency appropriate to the privileges granted to the holder of a private pilot license, and to:

(x) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(xi) operate the aircraft within its limitations;

(xii) complete all manoeuvres with smoothness and accuracy;

(xiii) exercise good judgment and airmanship;

(xiv) apply aeronautical knowledge; and

(xv) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(e) Medical fitness.

The applicant shall hold a current Class 2 Medical assessment.

Note. — Attention is called to 2.3.11.1 (c) (1) on the medical fitness requirements for private pilot license holders seeking an instrument rating.

2.3.4.2 Privileges of the holder of the license and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in this part, the privileges of the holder of a private pilot license shall be to act, but not for remuneration, as pilot-in-command or co-pilot of aircraft within the appropriate aircraft category engaged in non-revenue flights.

(b) Before exercising the privileges at night, the license holder shall have received dual instruction in aircraft within the appropriate category of aircraft in night flying, including take-off, landing and navigation.

2.3.4.3 Specific requirements for the issue of the aeroplane category rating

(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 aeroplanes appropriate to the class rating sought. The Licensing 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) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing 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 in aeroplanes not less than 10 hours of solo flight time appropriate to the class rating sought, under the supervision of an authorized 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 different aerodromes shall be made.

(b) Flight Instruction.

(1) The applicant shall have received dual instruction in aeroplanes appropriate to the class rating sought, 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:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(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; recognition of, and recovery from, incipient and full stalls;

(vi) flight at critically high airspeeds; recognition of, and recovery from, spiral dives;

(vii) normal and crosswind take-offs and landings;

(viii) maximum performance (short field and obstacle clearance) take-offs; short-field landings;

(ix) flight by reference solely to instruments, including the completion of a level 180° turn;

(x) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;

(xi) emergency operations, including simulated aeroplane equipment malfunctions;

(xii) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xiii) communication procedures and phraseology.

Note. — The instrument experience specified in 2.3.7.2 (i) and the night flying dual instruction in 2.3.7.1 (b) do not entitle the holder of a private pilot license to pilot aeroplanes under IFR.

(c) The requirements for the skill test for the PPL (A) are included in IS 2.3.4.2.

2.3.4.4 Specific requirements for the issue of the helicopter category rating

(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 Licensing 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) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (1) above can be reduced accordingly.

(3) The applicant shall have completed in helicopters not less than 10 hours of solo flight time under the supervision of an authorized 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.

(b) Flight Instruction.

(1) The applicant shall have received not less than 20 hours of dual instruction time in helicopters 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:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(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; authoritative approach;

(x) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(XI) communication procedures and phraseology.

(2) The applicant shall have received dual instrument flight instruction from an authorized flight instructor. The instructor shall 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.

Note. — The instrument experience specified in (2) above and the night flying dual instruction in 2.3.7.1 (b) do not entitle the holder of a private pilot license to pilot helicopters under IFR.

(c) The requirements for the skill test for the PPL (H) are included in IS 2.3.4.3.

2.3.4.5 Specific requirements for the issue of the for the Powered-Lift Category

(a) Experience.

(1) The applicant shall have completed not less than 40 hours of flight time as a pilot of powered-lifts. The Licensing 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.

(2) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (1) above could be reduced accordingly.

(3) The applicant shall have completed in powered-lifts not less than 10 hours of solo flight time under the supervision of an authorized 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 different aerodromes shall be made.

(b) Flight Instruction.

(1) 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:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(ii) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;

(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(iv) control of the powered-lift by external visual reference;

(v) ground manoeuvring and run-ups; hover and rolling take-offs and climb-out; hover and rolling approach and landings — normal, out of wind and sloping ground;

(vi) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

(vii) flight by reference solely to instruments, including the completion of a level 180° turn;

(viii) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

(ix) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;

(x) 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;

(xi) operations to from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xii) communication procedures and phraseology.

Note.— The instrument experience specified in 2.3.7.4 (vii) and the night flying dual instruction specified in 2.3.7.1 *do not entitle the holder of a private pilot license to pilot powered-lifts under IFR.*

(c) The requirements for the skill test for the PPL-powered-lift category are included in IS 2.3.4.4.

2.3.4.6 Specific requirements for the issue of the airship category rating

(a) Experience.

(1) The applicant shall have completed not less than 25 hours of flight time as a pilot of airships, including at least:

(i) 3 hours of cross-country flight training in an airship with a cross-country flight totalling not less than 45 km (25 NM);

(ii) 5 take-offs and 5 landings to a full stop at an aerodrome with each landing involving a flight in the traffic pattern at an aerodrome;

(iii) 3 hours of instrument time; and

(iv) 5 hours as pilot assuming the duties of the pilot-in-command under the supervision of the pilot-in-command.

(b) Flight Instruction.

(1) The applicant shall have received dual instruction in airships from an authorized flight instructor. The instructor shall ensure that the applicant has received instruction in at least the following areas:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(ii) pre-flight operations, including mass and balance determination, airship inspection and servicing;

(iii) ground reference manoeuvres;

(iv) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(v) techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used;

(vi) control of the airship by external visual reference;

(vii) take-offs, landings and go-arounds;

(viii) maximum performance (obstacle clearance) take-offs;

(ix) flight by reference solely to instruments, including the completion of a level 180o turn;

(x) navigation, cross-country flying using visual reference, dead reckoning and radio navigation aids;

(xi) emergency operations (recognition of leaks), including simulated airship equipment malfunctions; and

(xii) communication procedures and phraseology.

Note. — The instrument experience specified in (x) above and the night flying dual instruction specified in 2.3.7.1 (g) (ii) *do not entitle the holder of a private pilot license to pilot airships under IFR.*

(c) The requirements for the skill test for the PPL—Airship are included in IS 2.3.4.5.

2.3.4.7 Experience, Flight Instruction and Skill Test for the PPL—Balloon Category

(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 authorized instructor in at least the following areas:

(1) Pre-flight operations, including balloon assembly, rigging, inflation, mooring, and inspection;

(1) Aerodrome operations, transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology;

(2) Techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;

(3) Collision avoidance precautions;

(4) Control of a free balloon by external visual references;

(5) Recognition of and recovery from rapid descents;

(6) Cross-country flying using visual reference and dead reckoning;

(7) Approaches and landings, including ground handling; and

(8) Emergency procedures.

(c) The requirements for the skill test for the PPL-Balloon category are included in IS 2.3.4.6.

2.3.4.8 Experience, Flight Instruction and Skill Test for the PPL—Glider Category

(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 authorized 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 license in the aeroplane category may be credited with 3 hours towards the 6 hours of flight time required for the glider license.

(d) 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

(a) General requirements for the issue of the license appropriate to the aeroplane, airship, helicopter and powered-lift categories

(b) Age.

(1) The applicant shall be not less than 18 years of age.

(c) Knowledge.

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a commercial pilot license and appropriate to the category of aircraft intended to be included in the license, in at least the following subjects:

(2) Air law

(i) rules and regulations relevant to the holder of a commercial pilot license; rules of the air; appropriate air traffic services practices and procedures;

(3) 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;

(vii) Pass the required knowledge test on the knowledge subjects listed in IS 2.3.5.2.

(4) 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;

(5) Human performance

(i) human performance including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual *(Doc 9683).*

(6) 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;

(7) 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;

(8) 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;

(9) Human performance

(i) human performance including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual *(Doc 9683).*

(10) 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;

(11) 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) communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.

(d) Skill

(1) The applicant shall have demonstrated the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres described in in this part with a degree of competency appropriate to the privileges granted to the holder of a commercial pilot license, and to:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(i) operate the aircraft within its limitations;

(ii) complete all manoeuvres with smoothness and accuracy;

(iii) exercise good judgment and airmanship;

(iv) apply aeronautical knowledge; and

(v) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(e) Medical fitness.

(1) The applicant shall hold a current Class 1 Medical Assessment.

2.3.5.2 Privileges of the Holder of the License and the Conditions to Be Observed In Exercising Such Privileges

(a) subject to compliance with the requirements specified in this part, the privileges of the holder of a commercial pilot license shall be:

(1) to exercise all the privileges of the holder of a private pilot license in an aircraft within the appropriate aircraft category;

(2) to act as pilot-in-command of an aircraft within the appropriate aircraft category engaged in operations other than commercial air transportation;

(3) to act as pilot-in-command, in commercial air transportation, of an aircraft within the appropriate aircraft category and certificated for single-pilot operation;

(4) to act as co-pilot of an 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.

(b) Before exercising the privileges at night, the license holder shall have received dual instruction in aircraft within the appropriate category of aircraft in night flying, including take-off, landing and navigation.

Note. — Certain privileges of the license are curtailed by 2.3.2.8 (a) *for license holders when they attain their 60th and 65th birthdays.*

2.3.5.3 Specific Requirements for the Issue of the Aeroplane Category Rating

(a) Experience.

(1) The applicant shall have completed not less than 200 hours of flight time, or 150 hours if completed during a course of approved training, as a pilot of aeroplanes. The Licensing 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. Credit for such experience shall be limited to a maximum of 10 hours.

(2) 100 hours as pilot-in-command or, in the case of a course of approved training, 70 hours as pilot-in-command;

(3) 20 hours of cross-country flight time as pilot-in-command 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;

(4) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and

(5) if the privileges of the license are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as pilot-in-command.

(6) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (1) above can be reduced accordingly.

(b) Flight instruction.

(1) The applicant shall have received dual instruction in aeroplanes appropriate to the class and/or type rating, sought 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 commercial pilot:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(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; spin avoidance; recognition of, and recovery from, incipient and full stalls;

(v) flight with asymmetrical power for multi-engine class or type ratings;

(vi) flight at critically high airspeeds; recognition of, and recovery from, spiral dives;

(vii) normal and crosswind take-offs and landings;

(viii) maximum performance (short field and obstacle clearance) take-offs; short-field landings;

(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 and manoeuvres including simulated aeroplane equipment malfunctions;

(xii) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xiii) communication procedures and phraseology.

Note. — The instrument experience specified in this part and the night flying experience and dual instruction specified in this part do not entitle the holder of a commercial pilot license to pilot aeroplanes under IFR.

(2) The applicant shall have received, in actual flight, upset prevention and recovery training approved by the Licensing Authority.

Note 1. — Procedures for upset prevention and recovery training in actual flight are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

Note 2. — Guidance on upset prevention and recovery training in actual flight is contained in the Manual on Aeroplane Upset Prevention and Recovery Training (Doc 10011).

2.3.5.4 Specific Requirements for the Issue of the Helicopter Category Rating

(a) Experience.

(1) The applicant shall have completed not less than 150 hours of flight time, or 100 hours if completed during a course of approved training, as a pilot of helicopters. The Licensing 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 150 hours or 100 hours, as the case may be. Credit for such experience shall be limited to a maximum of 10 hours.

(2) The applicant shall have completed in helicopters not less than:

(i) 35 hours as pilot-in-command;

(ii) 10 hours of cross-country flight time as pilot-in-command including a cross-country flight in the course of which 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; and

(iv) if the privileges of the license are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landing patterns as pilot-in-command.

(3) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (1) above can be reduced accordingly.

(b) Flight instruction.

(1) The applicant shall have received dual instruction in helicopters 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 commercial pilot:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(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, authoritative approach and landing;

(xii) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xiii) communication procedures and phraseology.

Note. — The instrument experience specified in this part and the night flying experience and dual instruction specified in this part do not entitle the holder of a commercial pilot license to pilot helicopters under IFR.

(c) Skill test. The requirement for the skill test for the commercial pilot license—helicopter category are included in IS 2.3.5.3.

2.3.5.5 Specific Requirements for the Issue of the Powered-Lift Category Rating

(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 Licensing 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 not less than:

(i) 50 hours as pilot-in-command;

(ii) 10 hours of 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 landings 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 of the license are to be exercised at night, 5 hours of night flight time including 5 take-offs and landings as pilot-in-command.

(3) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (1) above could be reduced accordingly.

(b) Flight instruction

(1) The applicant shall have received dual instruction time in a powered-lift 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 commercial pilot:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(ii) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;

(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(iv) control of the powered-lift 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; hover and rolling take-offs and climb-out; hover and rolling approach 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, where available, radio navigation aids, including a flight of at least one hour;

(xi) 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;

(xii) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xiii) communication procedures and phraseology.

Note. — The instrument experience specified in (a) (3) above and (1) (x) above the night flying experience and dual instruction specified in 2.3.8.3 (iv) and 2.3.8.1 do not entitle the holder of a commercial pilot license to pilot powered-lifts under IFR.

(c) Skill test. The requirement for the skill test for the commercial pilot license—powered-lift category are included in IS 2.3.5.4.

2.3.5.6 Specific Requirements for the Issue of the Airship Category Rating

(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 of airships;

(ii) 30 hours in airships as pilot-in-command or pilot-in-command under supervision, 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 in the areas of operation listed in (b) (1 below).

(b) Flight instruction.

(1) The applicant shall have received dual instruction in airships 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 commercial pilot:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(ii) pre-flight operations, including mass and balance determination, airship inspection and servicing;

(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(iv) techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used;

(v) control of the airship by external visual reference;

(vi) recognition of leaks;

(vii) normal take-offs and landings;

(viii) maximum performance (short field and obstacle clearance) take-offs; short-field landings;

(ix) flight under IFR;

(x) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;

(xi) emergency operations, including simulated airship equipment malfunctions;

(xii) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xiii) communication procedures and phraseology.

Note. — The instrument experience specified in 2.3.6.2 i) and the night flying dual instruction specified in 2.3.2.2 do not entitle the holder of a private pilot license to pilot airships under IFR.

2.3.5.7 Experience, Flight Instruction and Skill Test for the CPL—Balloon Category

(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 authorized instructor in at least the following areas to the level of performance required for the commercial pilot:

(1) Recognize and manage threats and errors;

(1) Technical subjects;

(2) Pre-flight operations, including balloon assembly, rigging, inflation, mooring, and inspection;

(3) Pre-flight lesson on a manoeuvre to be performed in flight;

(4) Aerodrome operations, transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology;

(5) Techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;

(6) Collision avoidance precautions;

(7) Control of a free balloon by external visual references;

(8) Recognition of and recovery from rapid descents;

(9) Navigation and cross-country flying using visual reference and dead reckoning;

(10) Approaches and landings, including ground aeroplanes;

(11) Emergency procedures; and

(12) Post-flight procedures.

(c) Skill test. The requirement for the skill test for the commercial pilot license—balloon category are included in IS 2.3.5.6.

2.3.5.8 Experience, Flight Instruction and Skill Test for the CPL—Glider Category

(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 authorized instructor in at least the following areas of operation to the level of performance required for a commercial pilot:

(1) Recognize and manage threats and errors;

(2) Pre-flight preparation;

(3) Pre-flight procedures

(4) Aerodrome and gliderport 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.

(c) Skill test. The requirement for the skill test for the commercial pilot license—glider category are included in IS 2.3.5.7.

2.3.6 MULTI-CREW PILOT LICENCE—AEROPLANE

Note. — The holder of a multi-crew pilot license is authorized by 2.3.6.2 to act as co-pilot of an aeroplane required to be operated with a co-pilot. Such holder will be
eligible to obtain an airline transport pilot license appropriate to the aeroplane category, after fulfilling the requirements for that license, to be restricted to multi-crew operations unless the requirements of by 2.3.6.2 (a), by 2.3.6.2 (b) and 2.3.6.2 (c), as appropriate, are met (2.3.7.2 (b) refers).

2.3.6.1 General requirements for the issue of the license

(a) Age.

The applicant shall be not less than 18 years of age.

(b) Competencies

The applicant shall satisfactorily demonstrate the competencies identified in an adapted Competency model to perform as a co-pilot of a turbine-powered air transport aeroplane certificated for operation with a minimum crew of at least two pilots. The adapted Competency model shall be approved by the Licensing Authority, using as a basis the ICAO aeroplane pilot Competency framework contained in the procedure for Air Navigation Services – Training (PANS-TRG, Doc. 9868)

Note 1: - Knowledge, skills and attitudes underpin these competencies as described in the procedure for Air Navigation Services – Training (PANS-TRG Doc. 9868). The knowledge and skills described in 2.3.6.1 (c) and 2.3.6.1 (e) provide minimum requirements for the issuance of the multi-crew pilot license.

Note 2: - The competencies of the approved adapted competency model provide individual and countermeasures for the application of threat and error management. Guidance on threat and error management is contained in the procedure for Air Navigation Services – Training (PANS-TRG, Doc. 9868)

(c) Knowledge.

The applicant shall have met the requirements specified in 2.3.10.1 (d) for the airline transport pilot license appropriate to the aeroplane category in an approved training course.

(d) Training in the underpinning knowledge requirements shall be fully integrated with the training of the underpinning skill requirements.

(e) Skill.

The applicant shall have demonstrated the skills required for fulfilling all the competency units specified in Appendix 3 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 to:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual *(Doc 9683).*

(ii) smoothly and accurately, manually control the aeroplane within its limitations at all times, such that the successful outcome of a procedure or manoeuvre is assured;

(iii) operate the aeroplane 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; and

(v) 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.

(f) The competency standards to be achieved and the associated performance criteria for the multi-crew pilot license applicant should be publicly available.

(g) Medical fitness.

The applicant shall hold a current Class 1 medical assessment.

2.3.6.2 Privileges of the holder of the license and the conditions to be observed in exercising such privileges:

(a) Subject to compliance with the requirements specified in this part the privileges of the holder of a multi-crew pilot license shall be:

(1) to exercise all the privileges of the holder of a private pilot license in the aeroplane category provided the requirements of paragraph 2.3.7.5 (a) (1) have been met;

(2) to exercise the privileges of the instrument rating in a multi-crew operation; and

(3) to act as co-pilot of an aeroplane required to be operated with a co-pilot.

(b) Before exercising the privileges of the instrument rating in a single-pilot operation in aeroplanes, the license 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 skill requirement specified in 2.3.11.1 (b) appropriate to the aeroplane category.

(c) Before exercising the privileges of a commercial pilot license in a single-pilot operation in aeroplanes, the license holder shall have:

(1) 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;

(2) 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 totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made; and

(3) met the requirements for the commercial pilot license specified in in this part appropriate to the aeroplane category.

Note 1.— When a Contracting State grants single-pilot operation privileges to the holder of a multi-crew pilot license, it can document the privileges through an endorsement of the multi-crew pilot license or through the issuance of a commercial pilot license in the aeroplane category.

Note 2. — Certain privileges of the license are curtailed by 2.3.1.5 (a) *for license holders when they attain their 65th birthday.*

(d) Experience

(1) 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.

(2) Flight experience in actual flight shall include at least the experience requirements at 2.3.7.5 (a) (1), upset prevention and recovery training, night flying and flight by reference solely to instruments.

Note 1. — Procedures for upset prevention and recovery training in actual flight are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

Note 2. — Guidance on upset prevention and recovery training in actual flight is contained in the Manual on Aeroplane Upset Prevention and Recovery Training (Doc 10011).

(3) In addition to meeting the provisions of (2) above, the applicant shall have gained, in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, or in a flight simulation training device approved for that purpose by the Licensing Authority in accordance with Appendix 3, paragraph 4, the experience necessary to achieve the advanced level of competency defined in Appendix 3.

(e) Flight instruction

(1) The applicant shall have completed a course of approved training covering the experience requirements specified in 2.3.9.1 (d) (1).

(2) The applicant shall have received dual flight instruction in all the competency units specified in Appendix 3, to the level required for the issue of the multi-crew pilot license, to include the competency units required to pilot under instrument flight rules.

2.3.6.3 Experience, Flight Instruction, and Skill Test for the Multi-crew Pilot License— Aeroplane Category

(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) at 2.3.4.2, upset prevention and recovery training, night flying and flight by reference solely to instruments.

(1) 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. 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 license, 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 license—aeroplane category are included in IS 2.3.6.2.

Note 1: Procedures for upset prevention and recovery training in actual flight are contained in ICAO Doc 9868, Procedures for Air Navigation Services (PANS-TRG).

Note 2: Guidance on upset prevention and recovery training in actual flight is contained in ICAO Doc 10011, Manual on Aeroplane Upset Prevention and Recovery Training.

2.3.7 AIRLINE TRANSPORT PILOT LICENCE

2.3.7.1 General requirements for the issue of the license appropriate to the aeroplane, helicopter and powered-lift categories:

(a) Age.

The applicant shall be not less than 21 years of age.

(b) Knowledge.

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an airline transport pilot license and appropriate to the category of aircraft intended to be included in the license, in at least the following subjects:

(2) *Air law*

(i) rules and regulations relevant to the holder of an airline transport pilot license; rules of the air; appropriate air traffic services practices and procedures;

(3) *Aircraft general knowledge for aeroplanes, helicopters and powered-lifts*

(i) general characteristics and limitations of electrical, hydraulic, pressurization and other aircraft systems; flight control systems, including autopilot and stability augmentation;

(ii) principles of operation, handling procedures and operating limitations of aircraft engines; effects of atmospheric conditions on engine performance; relevant operational information from the flight manual or other appropriate document;

(iii) operating procedures and limitations of the relevant category of aircraft; effects of atmospheric conditions on aircraft performance in accordance with the relevant operational information from the flight manual;

(iv) use and serviceability checks of equipment and systems of appropriate 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 engines of appropriate aircraft;

(vii) for helicopters and powered-lifts, transmission (power trains) where applicable;

(4) *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, 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 helicopters and powered-lifts, effects of external loading on handling;

(5) *Human performance*

(i) human performance including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(6) *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 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;

(iv) in the case of aeroplanes and powered-lifts, practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts; jetstreams;

(7) *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;

(8) *Operational procedures*

(i) application of threat and error management to operational performance;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(i) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

(ii) precautionary and emergency procedures; safety practices;

(iii) operational procedures for carriage of freight and dangerous goods;

(iv) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;

(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;

(9) *Principles of flight*

(i) principles of flight;

(10) *Radiotelephony*

(i) communication procedures and phraseology; action to be taken in case of communication failure.

(c) In addition to the above subjects, the applicant for an airline transport pilot license applicable to the aeroplane or powered-lift category shall have met the knowledge requirements for the instrument rating at 2.3.11.1 (a) (1).

(a) Skill.

(1) The applicant for an ATPL shall have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and

(2) The applicant shall have demonstrated the ability to perform, as pilot-in-command of an aircraft within 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 engine, 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 aeroplanes and powered-lifts, procedures and manoeuvres for instrument flight described in 2.3.12.2), including simulated engine failure.

(b) In the case of an aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in 2.3.10.1 as pilot-in-command of a multi-engined aeroplane.

(c) The applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in 2.3.10.1 with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot license, and to:

(1) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(2) 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;

(3) operate the aircraft 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;

(5) exercise good judgment and airmanship, to include structured decision making and the maintenance of situational awareness; and

(6) 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.

(d) Medical fitness.

The applicant shall hold a current Class 1 Medical Assessment.

2.3.7.2 Privileges of the holder of the license and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in this part, the privileges of the holder of an airline transport pilot license shall be:

(1) to exercise all the privileges of the holder of a private and commercial pilot license in an aircraft within the appropriate aircraft category and, in the case of a license for the aeroplane and powered-lift categories, of the instrument rating; and

(2) to act as pilot-in-command, in commercial air transportation, of an aircraft within the appropriate category and certificated for operation with more than one pilot.

(b) When the holder of an airline transport pilot license in the aeroplane category has previously held only a multi-crew pilot license, the privileges of the license shall be limited to multi-crew operations unless the holder has met the requirements established in 2.3.9.1 (g) as appropriate. Any limitation of privileges shall be endorsed on the license.

Note. — Certain privileges of the license are curtailed by 2.3.1.5 (a) *for license holders when they attain their 60th and 65th birthdays.*

2.3.7.3 Specific Requirements for the Issue of the Aeroplane Category Rating

(a) Experience.

(1) The applicant shall have completed not less than 1 500 hours of flight time as a pilot of aeroplanes. The Licensing 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 1 500 hours. 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.

(2) The applicant shall have completed in aeroplanes not less than:

(i) 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;

(ii) 200 hours of cross-country flight time, of which not less than 100 hours shall 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) 100 hours of night flight as pilot-in-command or as co-pilot.

(3) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.3.10.2 (a) (1) can be reduced accordingly.

(b) Flight instruction.

(1) The applicant shall have received the dual flight instruction required at 2.3.8.3 (b) (1) for the issue of the commercial pilot license and at 2.3.12.2 (b) (1) for the issue of the instrument rating or at 2.3.9.1 (h) (1) for the issue of the multi-crew pilot license.

(c) Skill test. The requirement for the skill test for the ATPL—aeroplane category are included in IS 2.3.7.2.

2.3.7.4 Specific Requirements for the Issue of the Helicopter Category Rating

(a) Experience.

(1) The applicant shall have completed not less than 1 000 hours of flight time as a pilot of helicopters. The Licensing 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 1 000 hours. 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.

(2) The applicant shall have completed in helicopters 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) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot-in-command or as pilot-in-command under supervision;

(iii) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time; and

(iv) 50 hours of night flight as pilot-in-command or as co-pilot.

(3) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.3.10.3 (a) (1) can be reduced accordingly.

(b) Flight instruction.

The applicant shall have received the flight instruction required for the issue of the commercial pilot license (2.3.8.4 (b)).

Note.— The instrument time specified in (2) (iii) above *and the night flying time specified in* (2) (iv) above *do not entitle the holder of the airline transport pilot license— helicopter to pilot helicopters under IFR*

(c) Skill test. The requirement for the skill test for the ATPL—helicopter category are included in IS 2.3.7.3.

2.3.7.5 Specific Requirements for the Issue of the Powered-Lift Category Rating

(a) Experience.

(1) The applicant shall have completed not less than 1 500 hours of flight time as a pilot of powered-lifts. The Licensing 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 1 500 hours.

(2) The applicant shall have completed in powered-lifts 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 shall 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.

(3) When the applicant has flight time as a pilot of aircraft in other categories, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (1) above could be reduced accordingly.

(b) Flight instruction.

The applicant shall have received the dual flight instruction required at 2.3.8.5 (b) for the issue of the commercial pilot license and at 2.3.12.2 (b) (1) for the issue of the instrument rating.

(c) Skill test. The requirements for the skill test for the ATPL—powered lift category are included in IS 2.3.7.4.

2.3.8 INSTRUMENT RATING

2.3.8.1 Requirements for the Issue of the Rating for Aeroplane, Airship, Helicopter and Powered-Lift Categories

(a) Knowledge

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an instrument rating, in at least the following subjects:

(2) Air law

(i) rules and regulations relevant to flight under IFR; related air traffic services practices and procedures;

(3) 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 aircraft 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;

(4) 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;

(5) Human performance for the aircraft category being sought

(i) human performance relevant to instrument flight in aircraft including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(6) 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 helicopters and powered-lifts, effects of rotor icing;

(7) *Navigation for the aircraft category being sought*

(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;

(8) Operational procedures for the aircraft category being sought

(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, 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;

Note. — Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in the Procedures for Air Navigation Services (PANS-OPS, Doc 8168), Volume I — Flight Procedures. Procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.

(9) *Radiotelephony*

communication procedures and phraseology as applied to aircraft operations under IFR; action to be taken in case of communication failure.

(b) *Skill*

(1) The applicant shall have demonstrated in an aircraft of the category for which the instrument rating is being sought the ability to perform the procedures and manoeuvres described in 2.3.13.2 (b) (1) with a degree of competency appropriate to the privileges granted to the holder of an instrument rating, and to:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(ii) operate the aircraft for the category being sought, within its limitations;

(iii) complete all manoeuvres with smoothness and accuracy;

(iv) exercise good judgment 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.

(2) The applicant shall have demonstrated the ability to operate multi-engined aircraft within the appropriate category by reference solely to instruments with one engine inoperative, or simulated inoperative, if the privileges of the instrument rating are to be exercised on such aircraft.

Note. — Attention is called to 2.2.7.3 (a) *on the use of flight simulation training devices for demonstrations of skill.*

(c) *Medical fitness*

(1) Applicants who hold a private pilot license shall have established their hearing acuity on the basis of compliance with the hearing requirements for the issue of a Class 1 Medical Assessment.

(2) The Authority shall consider requiring the holder of a private pilot license to comply with the physical and mental, and visual requirements for the issue of a Class 1 Medical Assessment.

(3) Pass the required skill test on the subjects listed in IS 2.3.8.2.

(d) *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 2.3.8.2.

(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 2.3.8.2.

(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.

2.3.8.2 Privileges of the holder of the rating and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in 2.1.2.5, 2.1.5.6 and 2.2.1, the privileges of the holder of an instrument rating with a specific aircraft category shall be to pilot that category of aircraft under IFR.

(b) Before exercising the privileges on multi-engined aircraft, the holder of the rating shall have complied with the requirements of 2.2.7.

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.

(c) Experience.

(1) The applicant shall hold a pilot license for the aircraft category being sought.

(2) The applicant shall have completed not less than:

(i) 50 hours of cross-country flight time as pilot-in-command of aircraft in categories acceptable to the Licensing 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 authorized instructor.

(d) Flight instruction.

(1) The applicant shall have gained not less than 10 hours of the instrument flight time required in 2.3.13.2 (ii) while receiving dual instrument flight instruction in the aircraft category being sought, 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 holder of an instrument rating:

(i) 241pre-flight procedures, including the use of the flight man242ual or equivalent document, and appropriate air traffic se243rvices documents in the preparation of an IFR flight plan;244

(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;

(D) holding procedures;

(E) instrument approaches to specified minima;

(F) missed approach procedures;

(G) landings from instrument approaches;

(iv) in-flight manoeuvres and particular flight characteristics.

(2) If the privileges of the instrument rating are to be exercised on multi-engined aircraft, the applicant shall have received dual instrument flight instruction in a multi-engined aircraft within the appropriate category from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in the operation of the aircraft within the appropriate category by reference solely to instruments with one engine inoperative or simulated inoperative.

2.3.8.3 Circumstances In Which An Instrument Rating Is Required

The Authority shall, having issued a pilot license, 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.

Note. — The instrument rating is included in the airline transport pilot license — aeroplane or powered-lift category, multi-crew pilot license, and commercial pilot license — airship category. The provisions of (a) above *do not preclude the issue of a license having the instrument rating as an integral part thereof.*

2.3.8.4 Circumstances In Which Authorization To Conduct Instruction Is Required

(a) The Authority shall, having issued a pilot license, shall not permit the holder thereof to carry out flight instruction required for the issue of a pilot license or rating, unless such holder has received proper authorization from such Authority. Proper authorization shall comprise:

(1) a flight instructor rating on the holder's license; or

(2) the authority to act as an agent of an approved organization authorized by the Licensing Authority to carry out flight instruction; or

(3) a specific authorization granted by the Authority which issued the license.

(b) The Authority shall not permit a person to carry out instruction on a flight simulation training device required for the issue of a pilot license or rating unless such person holds or has held an appropriate license or has appropriate flight training and flight experience and has received proper authorization from such Authority.

2.3.8.5 Experience, Flight Instruction, Skill Test and Proficiency Check for the IR

(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 authorized 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 authorized 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 authorized 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 authorized 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 2.3.8.2 with a degree of competency appropriate to the privileges granted to the holder of an IR, and 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 judgment 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 coordination 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 2.3.8.2, if the privileges of the instrument rating are to be exercised on such aircraft.

(d) The skill test and proficiency check for the instrument rating is included in IS 2.3.8.2.

2.3.9 FLIGHT INSTRUCTOR RATING APPROPRIATE TO AEROPLANES, AIRSHIPS, HELICOPTERS AND POWERED-LIFTS

2.3.9.1 General Requirements

(a) Applicability.

(1) This Section prescribes the requirements for the issuance of instructor licenses, ratings or authorizations, the conditions under which those ratings and authorizations are necessary, and the privileges and limitations on those ratings and authorizations.

(2) All instructors shall read, speak, write and understand the language of Liberia and English, if required.

(3) The following instructor licenses, ratings and authorizations are issued under this part:

(i) Flight Instructor license;

(ii) Ground Instructor license, with basic, advanced, and instrument ratings; and

(iii) Instructor Authorization for Flight Simulation Training.

2.3.9.2 Requirements for the issue of the rating

(a) Knowledge.

(1) The applicant shall have met the knowledge requirements for the issue of a commercial pilot license as appropriate to the category of aircraft included in the license. In addition, the applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight instructor rating, in at least the following areas:

(i) techniques of applied instruction;

(ii) assessment of student performance in those subjects in which ground instruction is given;

(iii) the learning process;

(iv) elements of effective teaching;

(v) student evaluation and testing, training philosophies;

(vi) training program development;

(vii) lesson planning;

(viii) classroom instructional techniques;

(ix) use of training aids, including flight simulation training devices as appropriate;

(x) analysis and correction of student errors;

(xi) human performance relevant to flight instruction including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(xii) hazards involved in simulating system failures and malfunctions in the aircraft.

(b) Skill.

The applicant shall have demonstrated, in the category and class of aircraft for which flight instructor privileges are sought, the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction as appropriate.

(c) Experience.

(1) The applicant shall have met the experience requirements for the issue of a commercial pilot license as specified in 2.3.8.3 (a) (1), 2.3.8.4 (a) (1), 2.3.8.5 (a) (1) and 2.3.8.6 (a) (1) for each aircraft category, as appropriate.

(d) Flight instruction.

(1) The applicant shall, under the supervision of a flight instructor accepted by the Licensing Authority for that purpose:

(i) have received instruction in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and

(ii) have practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

(e) Age.

The applicant for a flight instructor license shall be of the appropriate age for the underlying license to be held.

(f) Medical fitness.

The applicant for a flight instructor license shall have a Class 1 medical certificate.

(g) Privileges, limitations and qualifications.

(1) A flight instructor is authorized within the limitations of that person's flight instructor license, and pilot license and ratings, to give training and endorsements that are required for, and relate to:

(i) A student pilot authorization;

(ii) A pilot license;

(iii) A flight instructor license;

(iv) A ground instructor license;

(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.

(h) Validity. Subject to compliance with the requirements specified in this Part, the validity period of instructor license is 2 years.

(i) Renewal. A flight instructor license 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 license; 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 license.

(3) If a flight instructor accomplishes the renewal requirements within the 90 days preceding the expiration month of his or her flight instructor license—

(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 subsection in an approved course conducted by an ATO certified under Part 3.

(j) Reissue. If the instructor license has expired, the applicant shall:

(1) Have received refresher training from an authorized 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 licenses. An applicant for an additional flight instructor license shall meet the requirements listed in 2.3.9.2 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 license 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 license 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 license 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 license 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 8.4.11(a)(3); or

(v) Logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of 8.4.10(b).

(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 license unless that flight instructor—

(A) Holds a current ground or flight instructor license with the appropriate rating, has held that license for at least 24 months, and has given at least 40 hours of ground training; or

(ii) Holds a current ground or flight instructor license with the appropriate rating, and has given at least 100 hours of ground training in a course which has been approved by the Authority.

(iii) Meets the eligibility requirements prescribed in 2.2.6.

(iv) For training in preparation for an aeroplane or helicopter rating, has given at least 200 hours of flight training as a flight instructor.

(v) 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, authorization, operating privilege, skill test, or knowledge test that is required by Part 2.

(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.

Note: Class B airspace as defined in Annex 11: 2.6.1 is IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.

(n) 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.

2.3.9.3 Privileges of the holder of the rating and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in 2.2.3 and 2.3.1.1, the privileges of the holder of a flight instructor rating shall be:

(1) to supervise solo flights by student pilots; and

(2) to carry out flight instruction for the issue of a private pilot license, a commercial pilot license, an instrument rating, and a flight instructor rating provided that the flight instructor:

(i) holds at least the license and rating for which instruction is being given, in the appropriate aircraft category;

(ii) holds the license and rating necessary to act as the pilot-in-command of the aircraft on which the instruction is given; and

(iii) has the flight instructor privileges granted entered on the license.

(b) The applicant, in order to carry out instruction for the multi-crew pilot license, shall have also met all the instructor qualification requirements.

Note.— Specific provisions for flight instructors carrying out instruction for the multi-crew pilot license exist in Chapter 6 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

2.3.10 GLIDER PILOT LICENSE

2.3.10.1 Requirements for the issue of the license

(a) Age

The applicant shall be not less than 16 years of age

(b) Knowledge.

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a glider pilot license, in at least the following subjects:

(2) Air law

Rules and regulations relevant to the holder of a glider pilot license; rules of the air; appropriate air traffic services practices and procedures;

(3) Aircraft general knowledge

(i) principles of operation of glider systems and instruments;

(ii) operating limitations of gliders; relevant operational information from the flight manual or other appropriate document;

(4) Flight performance, planning and loading

(i) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a glider pilot license, in at least the following subjects:

(ii) pre-flight and en-route flight planning appropriate to operations under VFR; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic;

(5) Human performance

Human performance relevant to the glider pilot including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(6) Meteorology

Application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry;

(7) Navigation

Practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

(8) Operational procedures

(i) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

(ii) different launch methods and associated procedures;

(iii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

(9) Principles of flight

Principles of flight relating to gliders.

(c) The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted to the holder of a glider pilot license, in communication procedures and phraseology as appropriate to VFR operations and on action to be taken in case of communication failure.

(d) Experience

(1) The applicant shall have completed not less than six hours of flight time as a pilot of gliders including two hours of solo flight time during which not less than 20 launches and landings have been performed.

(2) When the applicant has flight time as a pilot of aeroplanes, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (g) (1) above can be reduced accordingly.

(3) The applicant shall have gained, under appropriate supervision, operational experience in gliders in at least the following areas:

(i) pre-flight operations, including glider assembly and inspection;

(ii) techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures and signals used;

(iii) traffic pattern operations, collision avoidance precautions and procedures;

(iv) control of the glider by external visual reference;

(v) flight throughout the flight envelope;

(vi) recognition of, and recovery from, incipient and full stalls and spiral dives;

(vii) normal and crosswind launches, approaches and landings;

(viii) cross-country flying using visual reference and dead reckoning;

(ix) emergency procedures.

(e) Skill

(1) The applicant shall have demonstrated the ability to perform as pilot-in-command of a glider, the procedures and manoeuvres described in (g) (3) below with a degree of competency appropriate to the privileges granted to the holder of a glider pilot license, and to:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

(ii) operate the glider within its limitations;

(iii) complete all manoeuvres with smoothness and accuracy;

(iv) exercise good judgment and airmanship;

(v) apply aeronautical knowledge; and

(vi) maintain control of the glider at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(f) Medical fitness.

The applicant shall hold a current Class 2 Medical Assessment.

2.3.10.2 Privileges of the holder of the rating and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in this part, the privileges of the holder of a glider pilot license shall be to act as pilot-in-command of any glider provided the license holder has operational experience in the launching method used.

(b) If passengers are to be carried, the license holder shall have completed not less than 10 hours of flight time as a pilot of gliders.

2.3.11 FREE BALLOON PILOT LICENCE

Note. — The provisions of the free balloon pilot license apply to free balloons using hot air or gas.

2.3.11.1 Requirements for the Issue of the License

(a) *Age*

The applicant shall be not less than 16 years of age.

(b) *Knowledge*

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a free balloon pilot license, in at least the following subjects:

(2) Air law

(i) rules and regulations relevant to the holder of a free balloon pilot license; rules of the air; appropriate air traffic services practices and procedures;

(3) *Aircraft general knowledge*

(i) principles of operation of free balloon systems and instruments;

(ii) operating limitations of free balloons; relevant operational information from the flight manual or other appropriate document;

(iii) physical properties and practical application of gases used in free balloons;

(4) *Flight performance, planning and loading*

(i) effects of loading on flight characteristics; mass calculations;

(ii) use and practical application of launching, landing and other performance data, including the effect of temperature;

(iii) pre-flight and en-route flight planning appropriate to operations under VFR; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic;

(5) *Human performance*

(i) human performance relevant to the free balloon pilot including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(6) *Meteorology*

(i) application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry;

(7) *Navigation*

(i) practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

(8) *Operational procedures*

(i) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

(ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

(9) *Principles of flight*

Principles of flight relating to free balloons.

(c) The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted to the holder of a free balloon pilot license, in communication procedures and phraseology as appropriate to VFR operations and on action to be taken in case of communication failure.

(d) *Experience*

(1) The applicant shall have completed not less than 16 hours of flight time as a pilot of free balloons including at least eight launches and ascents of which one must be solo.

(2) The applicant shall have gained, under appropriate supervision, operational experience in free balloons in at least the following areas:

(i) pre-flight operations, including balloon assembly, rigging, inflation, mooring and inspection;

(ii) techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;

(iii) collision avoidance precautions;

(iv) control of the free balloon by external visual reference;

(v) recognition of, and recovery from, rapid descents;

(vi) cross-country flying using visual reference and dead reckoning;

(vii) approaches and landings, including ground handling;

(viii) emergency procedures.

(3) If the privileges of the license are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying.

(4) If passengers are to be carried for remuneration or hire, the license holder shall have completed not less than 35 hours of flight time including 20 hours as a pilot of a free balloon.

(e) *Skill*

(1) The applicant shall have demonstrated the ability to perform as pilot-in-command of a free balloon, the procedures and manoeuvres described in (d) (1) above with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot license, and to:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).*

(ii) operate the free balloon within its limitations;

(iii) complete all manoeuvres with smoothness and accuracy;

(iv) exercise good judgment and airmanship;

(v) apply aeronautical knowledge; and

(vi) maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(f) *Medical fitness*

The applicant shall hold a current Class 2 Medical Assessment.

2.3.11.2 PRIVILEGES OF THE HOLDER OF THE LICENSE AND THE CONDITIONS TO BE OBSERVED IN EXERCISING SUCH PRIVILEGES

(a) Subject to compliance with the requirements specified in this part, the privileges of the holder of a free balloon pilot license shall be to act as pilot-in-command of any free balloon provided that the license holder has operational experience in hot air or gas balloons as appropriate.

(b) Before exercising the privileges at night, the license holder shall have complied with the requirements specified in (d) (3) above.

2.3.11.3 Instructor Authorization for Flight Simulation Training

(a) Current and former holders of professional pilot licenses, having instructional experience can apply for an authorization to provide flight instruction in a flight simulation training device, provided the applicant has at least 1 year 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 authorization 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 authorization are to carry out instruction in a flight simulation training device 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 authorization for flight simulation training is 1 year.

(4) Renewal. Renewal of the authorization requires the successful completion of a proficiency check.

(5) Reissue. If the authorization has expired, the applicant must complete refresher training and successfully pass a skill test in the category and class or type of aircraft for which instructor authorization privileges are sought.

2.3.11.4 Ground Instructor License

(a) Age. The applicant for a ground instructor license shall be at least 18 years of age.

(b) Knowledge.

(1) Receive and log training from an authorized instructor and pass a knowledge test on the aeronautical knowledge areas appropriate to the aircraft category, for the license and ratings below as applicable—

(i) For a basic rating, the knowledge for a student and private pilot license 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

(c) Privileges. The holder of a ground instructor license may exercise the privileges appropriate to the license and rating held.

(1) A person who holds a ground instructor license with a basic rating is authorized to provide—

(i) Ground training in the aeronautical knowledge areas required for the issuance of a student pilot authorization 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 license with an advanced rating is authorized 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 authorized 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 authorized, within the limitations of the license 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 license is 1 year

(6) Renewal. The applicant for renewal of a ground instructor license 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 license 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 license and rating.

2.3.12 DESIGNATED PILOT EXAMINERS

2.3.12.1 Requirements and Skill Test

(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 license 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 Organization;

(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 license/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 license 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 license, and if applicable, class/type ratings appropriate to the designation;

(ii) Flight instructor license 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 license 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.

(k) The requirements for the designation of a pilot examiner are included in IS 2.3.10.1.

2.3.12.2 Experience Requirements for Private Pilot Examiner (PPE)

(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 license 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 aeroplane 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 license 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 license 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 license 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 license 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 license 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.

2.3.12.3 Experience Requirements for Commercial and Instrument Rating Pilot Examiner (CIRE)

(a) Experience: CIRE—Aeroplane Category. The examiner applicant shall have at least:

(1) A commercial pilot license 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 includes 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 of 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 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 license 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 includes at least:

(i) 500 hours in helicopters, of which 100 hours were accrued within the past year.

(ii) 100 hours of instrument flight time in actual or simulated conditions.

(iii) 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.

(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: CIRE—Powered-Lift Category. The examiner applicant shall have at least:

(1) A commercial pilot license 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 includes 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 of 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 include at least:

(i) 250 hours of instrument flight instruction, of which 200 hours were given in powered-lifts.

2.3.12.4 Experience Requirements for Commercial Pilot Examiners (CE)

(a) Experience: CE—Helicopter Category. The examiner applicant shall have at least:

(1) A commercial pilot license with a helicopter category rating.

(2) A valid flight instructor certificate with a helicopter category rating.

(3) 2,000 hours as PIC, which includes 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—

(iii) 100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought; and

(iv) 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:

(v) 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 license 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 license with a balloon category and applicable 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) Held a commercial pilot license 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 license 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.

2.3.12.5 Experience Requirements for Airline Transport Pilot (ATPL) Examiners (ATPE)

(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 includes 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 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 includes at least:

(i) 1,200 hours in helicopters, of which 100 hours were accrued within the past year;

(ii) 100 hours of 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 includes 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 of 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 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.

2.3.12.6 Experience Requirements for Flight Instructor Examiner (FIE)

(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

2.4.1 APPLICABILITY

This section prescribes the requirements for the issue, renewal and re-issue of a flight engineers license and ratings and for designated flight engineer examiners.

2.4.2 GENERAL RULES CONCERNING FLIGHT NAVIGATOR AND FLIGHT ENGINEER LICENCES

(a) A person shall not act as a flight engineer of an aircraft registered in Liberia unless a valid license 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 authorization may be provided in writing to the license holder by the Authority in place of issuing the class or type rating in accordance with this Part. This authorization will be limited in validity to the time needed to complete the specific flight.

(c) An applicant for renewal or re-issue of an FE license and class rating shall meet the requirements as are specified for the license and rating in this Part.

2.4.3 AUTHORITY TO ACT AS A FLIGHT CREWMEMBER

(a) A person shall not act as a flight crewmember of an aircraft registered in Liberia unless a valid license 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 license and class rating for the aircraft to be flown.

2.4.4 FLIGHT ENGINEER LICENCE, CLASS RATING, AND EXPERIENCE REQUIREMENTS

2.4.4.1 Requirements for the Issue of the License

(a) Age.

(1) The applicant shall be not less than 18 years of age.

(b) Knowledge.

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight engineer license, in at least the following subjects:

(2) Air law

(i) rules and regulations relevant to the holder of a flight engineer license; rules and regulations governing the operation of civil aircraft pertinent to the duties of a flight engineer;

(3) Aircraft general knowledge

(i) basic principles of engines, 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 engines; 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) pressurization 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;

(4) 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 performance data including procedures for cruise control;

(5) Human performance

Human performance relevant to the flight engineer including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(6) 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;

(7) Principles of flight

(i) fundamentals of aerodynamics;

(8) Radiotelephony

(i) communication procedures and phraseology.

(c) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight engineer license in at least the following subjects:

(i) fundamentals of navigation; principles and operation of self-contained systems; and

(ii) operational aspects of meteorology.

(d) Experience.

(1) The applicant shall have completed, under the supervision of a person accepted by the Licensing Authority for that purpose, not less than 100 hours of flight time in the performance of the duties of a flight engineer. The Licensing Authority shall determine whether experience as a flight engineer in a flight simulator, which it has approved, is acceptable as part of the total flight time of 100 hours. Credit for such experience shall be limited to a maximum of 50 hours.

(2) When the applicant has flight time as a pilot, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of (e) (1) above can be reduced accordingly.

(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 Licensing 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.

(e) Skill.

(1) The applicant shall have demonstrated the ability to perform as flight engineer of an aircraft, the duties and procedures described in (e) (2) above with a degree of competency appropriate to the privileges granted to the holder of a flight engineer license, and to:

(i) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(ii) use aircraft systems within the aircraft's capabilities and limitations;

(iii) exercise good judgment and airmanship;

(iv) apply aeronautical knowledge;

(v) perform all the duties as part of an integrated crew with the successful outcome assured; and

(vi) communicate effectively with the other flight crew members.

(2) The use of a flight simulation training device for performing any of the procedures required during the demonstration of skill described in (f) (1) above shall be approved by the Licensing Authority, which shall ensure that the flight simulation training device is appropriate to the task.

(3) Requirements for the skill test are given at IS 2.3.18.2.

(f) Medical.

(1) The applicant shall hold a current Class 2 Medical Assessment.

(1) Requirements for the skill test are given at IS 2.4.4.4.

(2) 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) Renewal. The Flight Engineer License 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.

2.4.4.2 Privileges of the holder of the license and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in 2.2.3, 2.11.1.5 and 2.11.1.6, the privileges of the holder of a flight engineer license shall be to act as flight engineer of any type of aircraft on which the holder has demonstrated a level of knowledge and skill, as determined by the Licensing Authority on the basis of those requirements specified in (c) and (f) above which are applicable to the safe operation of that type of aircraft.

(b) The types of aircraft on which the holder of a flight engineer license is authorized to exercise the privileges of that license, shall be either entered on the license or recorded elsewhere in a manner acceptable to the Licensing Authority

(c) 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.

(d) Validity. Subject to compliance with the requirements specified in this Part, the validity period of the flight engineer license and class rating is five years.

(e) Renewal. The Flight Engineer License 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.

(f) Reissue. If the Flight Engineer License has expired, the applicant shall have received refresher training acceptable to the Authority and pass the skill test on the areas of operation contained in IS 2.4.4.4.

2.4.4.3 Flight Engineer Class Ratings

(a) The Authority may issue the following class ratings to be placed on a flight engineer's license when the applicant completes the requirements in this Part for the rating sought:

(1) Reciprocating engine powered;

(2) Turbo propeller 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.

2.4.4.4 Recent Experience Requirements

(a) No person holding a flight engineer license and class rating shall exercise the privileges of the flight engineer license 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.

2.4.4.5 Flight Engineer: Skill Test and Proficiency Check

(a) The requirements for the skill test and proficiency check for the flight engineer licenses are included in IS 2.4.4.4.

2.4.5 INSTRUCTORS FOR FLIGHT ENGINEER LICENCES

2.4.5.1 Requirements for Flight Engineer Instructor License and Class Rating

(a) Age. An applicant for a flight engineer instructor license and class rating shall be at least 18 years of age.

(b) Medical. An applicant for a flight engineer instructor license shall hold a Class 2 medical certificate.

(c) Knowledge.

(1) An applicant for a flight engineer instructor license 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 license and class rating shall hold at least a current and valid flight engineer license and class rating for which the instructor license is sought and have a minimum of 1,500 hours flight time as a flight engineer.

(e) Flight instruction. Received flight instruction from an authorized 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 practiced 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 license and class rating are to give flight and ground instruction to flight engineer license 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 license is 2 years.

(h) Renewal. A flight engineer instructor license 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 license or class rating:

(3) One simulator session of at least 3 hours; or

(4) One flight exercise of at least 1 hour including at least 2 take-offs and landings.

(i) Reissue. If the flight engineer instructor license 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 2.4.4.4.

2.4.5.2 Instructor Authorization for Flight Simulation Training

(a) Current or former holders of flight engineer licenses, having instructional experience may apply for an authorization to provide flight instruction in a flight simulation training device, provide the applicant has at least 1 year 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 authorization 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 authorization are to carry out instruction in a flight simulation training device 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 authorization for flight simulation training is 1 year.

(4) Renewal. Renewal of the authorization requires the successful completion of a proficiency check.

(5) Reissue. If the authorization has expired, the applicant must complete refresher training and successfully pass a skill test in the category and class or type of aircraft for which instructor authorization privileges are sought.

2.4.6 DESIGNATED FLIGHT ENGINEER EXAMINERS

2.4.6.1 Requirements

(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 license 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 license or company flight engineer check airman authorization 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 license/class ratings and flight engineer instructor license or check airman authorization that has 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 license/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 license 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 license 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 license 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.

2.4.6.2 Skill Test for Designated Flight Engineer Examiners

(a) The requirements for the skill test for designated flight engineer examiners is included in IS 2.4.6.2

2.5 FLIGHT NAVIGATOR LICENCE

2.5.1 FLIGHT NAVIGATOR LICENCE, INSTRUCTORS AND DESIGNATED EXAMINERS

2.5.1.1 Applicability

(a) This section prescribes the requirements for the issue, renewal and re-issue of a flight navigator license.

2.5.1.2 General Rule Concerning Flight Navigator Licenses

(a) An applicant shall, before being issued with a flight navigator license or a flight engineer license, meet such requirements in respect of age, knowledge, experience, skill and medical fitness as are specified for those licenses.

(b) An applicant for a flight navigator license or a flight engineer license shall demonstrate such requirements for knowledge and skill as are specified for those licenses, in a manner determined by the Licensing Authority.

(c) An applicant shall for renewal or re-issue of a flight navigator license, meet the requirements as are specified for that license in this Part.

2.5.1.3 Requirements for the issue of the license

(a) Age.

(1) The applicant shall be not less than 18 years of age.

(b) Knowledge.

(1) The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight navigator license, in at least the following subjects:

(2) *Air law*

Rules and regulations relevant to the holder of a flight navigator license; appropriate air traffic services practices and procedures;

(3) *Flight performance, planning and loading*

(i) effects of loading and mass distribution on aircraft performance;

(ii) use 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;

(4) *Human performance*

Human performance relevant to the flight navigator including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual *(Doc 9683).*

(5) *Meteorology*

(i) interpretation and practical 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 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;

(6) *Navigation*

(i) dead-reckoning, pressure-pattern and celestial navigation procedures; 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 navigation of the aircraft;

(iii) use, accuracy and reliability of navigation systems used in departure, en-route and approach phases of flight; identification of radio navigation aids;

(iv) principles, characteristics and use of self-contained and external-referenced navigation systems; operation of airborne equipment;

(v) the celestial sphere including the movement of heavenly bodies and their selection and identification for the purpose of observation and reduction of sights; calibration of sextants; the completion of navigation documentation;

(vi) definitions, units and formulae used in air navigation;

(7) Operational procedures

Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes, abbreviations, and instrument procedure charts for departure, en-route, escent and approach;

(8) *Principles of flight*

principles of flight;

(9) *Radiotelephony*

Communication procedures and phraseology.

(c) Experience.

(1) The applicant shall have completed in the performance of the duties of a flight navigator, not less than 200 hours of flight time acceptable to the Licensing Authority, in aircraft engaged in cross-country flights, including not less than 30 hours by night.

(2) When the applicant has flight time as a pilot, the Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.4.9.1 (e) can be reduced accordingly.

(3) The applicant shall produce evidence of having satisfactorily determined the aircraft's position in flight, and used that information to navigate the aircraft, as follows:

(i) by night — not less than 25 times by celestial observations; and

(ii) by day — not less than 25 times by celestial observations in conjunction with self-contained or external-referenced navigation systems.

(d) Skill.

The applicant shall have demonstrated the ability to perform as flight navigator of an aircraft with a degree of competency appropriate to the privileges granted to the holder of a flight navigator license, and to:

(1) recognize and manage threats and errors;

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(PANS-TRG, Doc 9868),. Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

(2) exercise good judgment and airmanship;

(3) apply aeronautical knowledge;

(4) perform all duties as part of an integrated crew; and

(5) communicate effectively with the other flight crew members.

(e) Medical:

The applicant shall hold a current Class 2 Medical Assessment.

2.5.1.4 PRIVILEGES OF THE HOLDER OF THE LICENSE AND THE CONDITIONS TO BE OBSERVED IN EXERCISING SUCH PRIVILEGES

(a) Subject to compliance with the requirements specified in 2.2.3, 2.11.1.5 and 2.11.1.6, the privileges of the holder of a flight navigator license shall be to act as flight navigator of any aircraft. If the privileges include radiotelephony communication, the license holder shall comply with the requirements specified in 2.2.4.

(b) Validity. Subject to compliance with the requirements specified in this Part, the validity period of the license is five years.

(c) Recent experience requirements. No person holding a flight navigator license shall exercise the privileges of the flight navigator license unless he/she has completed within the past 6 calendar months –

(d) At least 30 hours of flight time as a flight navigator, or

(e) Completed a proficiency check.

(f) Renewal of the flight navigator license. For renewal of the license, the applicant shall pass a proficiency check on the areas of operation in IS 2.5.4.2

(g) Reissue. If the Flight Navigator License has expired, the applicant shall have received refresher training acceptable to the Authority, and pass a skill test on the areas of operation contained in IS 2.5.4.2.

2.5.1.5 Flight Navigator License: Skill Test and Proficiency Check

(a) The areas of operation for the skill test and proficiency check, are included in IS 2.5.4.2.

2.5.1.6 Flight radiotelephone operator

Where the knowledge and skill of an applicant have been established as satisfactory in respect of the certification requirements for the radiotelephone operator's restricted certificate specified in the general radio regulations annexed to the International Telecommunication Convention and the applicant has met the requirements that are pertinent to the operation of the radiotelephone on board an aircraft, the Authority may endorse a license already held by the applicant (as provided for in IS 2.2.10 (xiii) or issue a separate license as appropriate.

Note: Skill and knowledge requirements on radiotelephony procedures and phraseology have been developed as an integral part of all aeroplane, airship, helicopter and powered-lift pilot licenses.

2.5.2 INSTRUCTOR REQUIREMENTS FOR FLIGHT NAVIGATORS

2.5.2.1 Requirements for Flight Navigator Instructor License

(a) Age. An applicant for a flight navigator instructor license shall be at least 18 years of age.

(b) Medical. An applicant for a flight navigator instructor license shall hold a Class 2 medical certificate.

(c) Knowledge.

(1) An applicant for a flight navigator instructor license shall have met the instructor knowledge requirements in 2.2.6 of this part; and

(2) Meet any additional requirements as may be specified by the Authority.

(d) Experience. The applicant for a flight navigator instructor license shall hold at least a current and valid flight navigator license for which the instructor license is sought and have a minimum of 1,500 hours flight time as a flight navigator.

(e) Flight instruction. Received flight instruction from an authorized 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 practiced instructional techniques in those procedures in which it is intended to provide flight instruction.

(f) Privileges. The privileges of a flight navigator instructor license are to give flight and ground instruction to flight navigator license 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 navigator instructor license is 2 years.

(h) Renewal. A flight navigator instructor license 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 two flight exercises in an approved course for a flight navigator license or class rating in which the aircraft position was determined by use of celestial, ground based and electronic navigational systems; or

(2) Received refresher training acceptable to the Authority.

(i) Reissue. If the flight navigation instructor license has expired, the applicant shall:

(1) Have received refresher training acceptable to the Authority; and

(2) Passed a skill test on the areas of operation listed in IS: 2.5.4.2.

2.5.3 DESIGNATED FLIGHT NAVIGATOR EXAMINERS

2.5.3.1 Requirements

(a) Age: An applicant for a designated flight navigator examiner shall be at least 21 years of age.

(b) Medical. An applicant for a designated flight navigator examiner shall hold a Class 1 medical certificate.

(c) Eligibility. An applicant for a designated flight navigator examiner shall:

(1) Hold the flight navigator license for which examining authority is sought;

(2) Have a reputation for integrity and dependability in the industry and the community;

(3) Have a good record as a flight navigator in regard to accidents, incidents, and violations; and

(4) Have a flight navigator license that has never been revoked for falsification or forgery.

(d) Knowledge. The applicant for a designated flight navigator examiner shall pass a pre-designation knowledge test in the areas appropriate to the license rating for which designation is sought.

(e) Skill test. The applicant for a designated flight navigator examiner shall pass a skill test on the areas of operation listed in IS 2.5.6.2 conducted by an inspector of the Authority who holds a current and valid flight navigator license.

(f) Maintaining currency. After designation, a designated flight navigator examiner shall maintain currency by:

(1) Attending initial and recurrent training provided by the Authority; and

(2) Maintain a current and valid:

(i) Flight navigator license; and

(ii) Class 2 medical certificate.

(g) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the flight navigator examiner's designation are to conduct skill tests and proficiency checks for a flight navigator license as listed on the designated flight navigator 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 navigator 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 2.5.6.2.

2.5.3.2 Skill Test for Designated Flight Navigator Examiner

(a) The requirement for a skill test for designated flight navigator examiners are included in IS 2.5.6.2.

2.6 LICENCES AND RATINGS FOR PERSONNEL OTHER THAN FLIGHT CREW MEMBERS

2.6.1 GENERAL RULES CONCERNING LICENSES AND RATINGS FOR PERSONNEL OTHER THAN FLIGHT CREW MEMBERS

(a) An applicant shall, before being issued with any license or rating for personnel other than flight crew members, meet such requirements in respect of age, knowledge, experience and where appropriate, medical fitness and skill, as are specified for that license or rating.

(b) An applicant, for any license or rating for personnel other than flight crew members, shall demonstrate, in a manner determined by the Licensing Authority, such requirements in respect of knowledge and skill as are specified for that license or rating.

2.6.2 AIRCRAFT MAINTENANCE (TECHNICIAN/ENGINEER/MECHANIC)

Note. — The terms in brackets are given as acceptable additions to the title of the license. Each Contracting State is expected to use in its own regulations the one it prefers.

2.6.2.1 Requirements for the Issue of the License

(a) *Age*

The applicant shall be not less than 18 years of age.

(b) Knowledge

(1) The applicant shall have demonstrated a level of knowledge relevant to the privileges to be granted and appropriate to the responsibilities of an aircraft maintenance license holder, in at least the following subjects:

(2) *Air law and airworthiness requirements*

Rules and regulations relevant to an aircraft maintenance license holder including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organization and procedures;

(3) *Natural science and aircraft general knowledge*

Basic mathematics; units of measurement; fundamental principles and theory of physics and chemistry applicable to aircraft maintenance;

(4) Aircraft engineering

(i) haracteristics and applications of the materials of aircraft construction including principles of construction and functioning of aircraft structures, fastening techniques; engines and their associated systems; mechanical, fluid, electrical and electronic power sources; aircraft instrument and display systems; aircraft control systems; and airborne navigation and communication systems;

(5) *Aircraft maintenance*

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

(6) *Human performance*

Human performance, including principles of threat and error management, relevant to aircraft maintenance.

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual *(Doc 9683).*

(c) Experience

(1) The applicant shall have had the following experience in the inspection, servicing and maintenance of aircraft or its components:

(i) for the issue of a license with privileges for the aircraft in its entirety, at least:

(A) four years; or

(B) two years if the applicant has satisfactorily completed an approved training course; and

(ii) for the issue of a license with privileges restricted in accordance with 2.5.2.3 (1) (a), (b) or (c) , a period of time that will enable a level of competency equivalent to that required in a) to be attained, provided that this is not less than:

(A) two years; or

(B) such a period as the State considers necessary to provide an equivalent level of practical experience to applicants who have satisfactorily completed an approved training course.

(d) Training

The applicant shall have completed a course of training appropriate to the privileges to be granted.

Note. — The Training Manual *(Doc 7192), Part D-1, contains guidance material on a training course for applicants for an aircraft maintenance license.*

(e) Skill

The applicant shall have demonstrated the ability to perform those functions applicable to the privileges to be granted.

2.6.2.2 Privileges of the Holder of the License and the Conditions to Be Observed In Exercising Such Privileges

(a) Subject to compliance with the requirements specified in 2.5.2.3 (e) and 2.5.2.3 (g), the privileges of the holder of an aircraft maintenance license shall be to certify the aircraft or parts of the aircraft as airworthy after an authorized repair, modification or installation of an engine, accessory, instrument, and/or item of equipment, and to sign a maintenance release following inspection, maintenance operations and/or routine servicing.

(b) The privileges of the holder of an aircraft maintenance license specified in 2.5.2.3 (a) shall be exercised only:

(1) in respect of such:

(i) aircraft as are entered on the license in their entirety either specifically or under broad categories; or

(ii) airframes and engines and aircraft systems or components as are entered on the license either specifically or under broad categories; and/or

(iii) aircraft avionic systems or components as are entered on the license either specifically or under broad categories;

(iv) provided that the license holder is familiar with all the relevant information relating to the maintenance and airworthiness of the particular aircraft for which the license holder is signing a Maintenance Release, or such airframe, engine, aircraft system or component and aircraft avionic system or component which the license holder is certifying as being airworthy; and

(v) on condition that, within the preceding 24 months, the license holder has either had experience in the inspection, servicing or maintenance of an aircraft or components in accordance with the privileges granted by the license held for not less than six months, or has met the provision for the issue of a license with the appropriate privileges, to the satisfaction of the Licensing Authority.

(c) The Authority shall prescribe the scope of the privileges of the license holder in terms of the complexity of the tasks to which the certification relates.

(d) Details of the certification privileges shall be endorsed on or attached to the license, either directly or by reference to another document issued by the Authority.

(e) When the Authority authorizes an approved maintenance organization to appoint non-licensed personnel to exercise the privileges of 2.5.2.3 (a), the person appointed shall meet the requirements specified in 2.5.2.2.

2.6.2.3 Privileges of the holder of the license and the conditions to be observed in exercising such privileges for RPAS.

(a) The privileges of the holder of an aircraft maintenance license specified in 2.4.2.3 shall be exercised only in respect of such:

(1) RPA or RPS as are entered on the license either specifically or under broad categories; or

(2) RPAS and associated C2 link as are entered on the license either specifically or under broad categories after appropriate knowledge and practical training on maintenance of the RPAS and associated C2 link system.

(b) When the Authority authorizes an approved maintenance organization to appoint non-licensed personnel to exercise the privileges of 2.4.2.4, the person appointed shall meet the requirements specified in 2.4.2.2.

2.6.2.4 Duration of AMT License

(a) Validity. The duration of the AMT license is five years.

(a) Renewal. An AMT license that has not expired may be renewed for an additional five years if the holder presents evidence to the Authority that he/she has within the past 24 months has exercised the privileges of the license.

(b) Reissue. If the AMT license 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 AMT General, and any associated ratings.

2.6.2.5 Recent Experience Requirements

(a) A licensed AMT may not exercise the privileges of his/her license 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 AMT under his/her license and rating;

(ii) Technically supervised other AMTs;

(iii) Provided aviation maintenance instruction or served as the direct supervisor of persons providing aviation maintenance instruction for an AMT 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) (1) (i) through (a) (1) (iv) of this subsection.

2.6.2.6 Display of License

(a) Each person who holds an AMT 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 authorized representative of the Director General, or any Federal, State, or local law enforcement officer.

2.6.3 INSPECTION AUTHORISATIONS

Note: While the Inspection Authorization is not specifically in ICAO Annex 1, it does exceed the previous ICAO Annex 1 standards for a Type I AMT which typically performed maintenance on small aircraft. See ICAO Doc 7192, D-1, Appendix 3 to Chapter 1.

2.6.3.1 Applicability

(a) This Subpart prescribes the requirements for issuance of inspection authorizations, and the conditions under which these authorizations are necessary.

2.6.3.2 Eligibility Requirements: General

(a) An applicant for an Inspection Authorization shall:

(1) Hold a currently effective and valid AMT 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 five 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 Regulations.

(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.

2.6.3.4 Inspection Authorization: Duration

(a) Each inspection authorization expires on June 31 of each year.

(b) An inspection authorization ceases to be effective whenever any of the following occurs:

(1) The authorization 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) for issuance of his/her authorization.

(c) The holder of an inspection authorization that is suspended or revoked shall return it to the Authority.

2.6.3.5 Renewal of Authorization

(a) To be eligible for renewal of an Inspection Authorization for a 1-year period, an applicant shall, within 14 days prior to the expiration of the authorization, present evidence to the Authority that the applicant still meets the requirements of 2.6.3.2 and show that, during the current period of authorization, the applicant has—

(1) Performed at least one annual inspection during each 3 month period the applicant held the authorization;

(2) Performed inspections of at least two major repairs or major modifications for each 3 month period the applicant held the authorization;

(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 authorization;

(4) Performed any combination of paragraphs (a)(1) through (a)(3);

(5) Successfully completed an Inspection Authorization 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.

(b) The holder of an inspection authorization that has been in effect for less than 3 months before the expiration date need not comply with paragraph (a)(1) through (5) of this section.

2.6.3.6 Privileges and Limitations

(a) When exercising the privileges of an IA, the holder shall keep it available for inspection by the aircraft owner and the AMT submitting the aircraft, repair, or alteration for approval (if any), and shall present it at the request of the Authority or an authorized representative of the Director General, or at the request of any Federal, State, or local law enforcement officer.

(b) The holder of an Inspection Authorization (IA) with a current and valid AMT 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 AMT license may not:

(1) Exercise the privileges of the authorization unless he or she holds a current and valid AMT license with airframe and powerplant 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.

(4) Inspect and approve for return to service any aircraft maintained in accordance with a continuous maintenance program approved under Part 9.

(5) Exercise any privilege of an Inspection Authorization 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).

(6) Exercise the privileges of the authorization 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 AVIATION REPAIRMAN (AR)

Note: This license is not specified in ICAO Annex 1. Regulations contained in the subpart are based on 14 CFR Part 65 and are present here for States that wish to maintain closer supervision on individuals performing work in an Approved Maintenance Organization.

2.6.4.1 Applicability

(a) This Subpart prescribes the requirements for issuance of Aviation Repairman (AR) licenses and ratings, and the conditions under which those licenses and ratings are necessary.

(b) The AR license shall only be issued to eligible employees who perform specialized tasks of either –

(1) An AMO, or

(2) An AOC holder authorized to perform maintenance, preventive maintenance, or modifications under an equivalent system in accordance with 9.4.3(a).

2.6.4.2 Aviation Repairman License: Eligibility

(a) An applicant for an aviation repairman license and shall—

(1) Be at least 18 years of age.

(2) Demonstrate the ability to read, write, speak, and understand the Liberia language, and English if required by the Authority, 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 organization certificated under Part 6 or an air operator certificated under Part 9 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 subpart:

(1) Propeller.

(2) Computer.

(3) Instrument.

(4) Accessory.

(5) Components.

(6) Welding.

(7) Nondestructive Testing (NDT).

(8) Other as may be designated by the Authority.

(b) At no instance shall an aviation repairman license be issued with an airframe and/or powerplant or avionics rating to circumvent the process of obtaining an AMT license.

(c) Ratings for an applicant employed by an AMO or AOC holder shall coincide with the rating(s) issued at the AMO or approved for the AOC holder 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 repairman license be issued a rating for which the AMO has not been issued, nor the AOC holder approved to perform.

(e) Ratings for an applicant employed by an air operator shall coincide with the approved specific operating provisions and the approved maintenance control manual that identifies the air operator's authorizations limited to the specific job for which the person is employed to perform, supervise, or approve for return to service.

Note: When employed by an air operator with the authorization to perform and approve for return to service maintenance under an equivalent system in Part 9, an aviation repairman license should correspond to the specialty shop or group in which they perform, supervise, or approve for return to service an aeronautical product or aircraft. For example, Hydraulic component overhaul, landing gear overhaul, special inspections, non-destructive testing, turbine disc overhaul, etc.

2.6.4.4 Aviation Repairman Licenses: Privileges and Limitations

(a) An aviation repairman may perform or supervise the maintenance, preventive maintenance, or alteration of aircraft, airframes, aircraft engines, propellers, appliances, components, and parts appropriate to the designated specialty area for which the aviation repair specialist is licensed and rated, but only in connection with employment by an AMO approved under Part 6 or an AOC holder that is authorized to perform maintenance, preventive maintenance, or modifications under an equivalent system in accordance with 9.4.3(a).

(b) An aviation repairman may not perform or supervise duties unless the aviation repairman understands the current instructions of the employing certificate holder and the instructions for continued airworthiness, which relate to the specific operations concerned.

2.6.4.5 Display of License

(a) Each person who holds an aviation repairman 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 authorized representative of the Director General, or any Federal, State, or local law enforcement officer.

2.6.4.6 Duration of License

(a) Validity.

(1) The duration of the aviation repairman license is five years provided the license holder is in the continual employ of the sponsoring AMO or an AOC in an aviation repairman position.

(2) An aviation repairman license must be surrendered to the Authority at the time the license holder leaves the employ of the AMO or AOC.

(b) Renewal. An aviation repairman license 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 AVIATION MECHANIC TECHNICIAN LICENCES

2.6.5.1 Requirements for Aviation mechanic Technician Instructor License and Rating

(a) Age. An applicant for aviation mechanic technician instructor license and rating shall be at least 21 years of age.

(b) Knowledge.

(1) An applicant for an aviation mechanic technician instructor license 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 aviation mechanic technician instructor license and rating shall hold at least a current and valid AMT license and rating for which the instructor license is sought and have a minimum of three years' experience as an AMT.

(d) Privileges. The privileges of aviation mechanic technician instructor license are to give instruction to aviation mechanic license 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 aviation mechanic technician instructor license is 2 years.

(f) Renewal. An aviation mechanic technician instructor license 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 AMT license or rating; or

(2) Received refresher training acceptable to the Authority.

(g) Reissue. If the aviation mechanic technician instructor license 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 AMT General, and any associated ratings.

2.6.6 DESIGNATED MECHANIC EXAMINER (DME)

2.6.6.1 General Requirements

(a) Age. An applicant for a designated mechanic examiner shall be at least 23 years of age.

(b) Medical. There are no medical requirements for a mechanic examiner.

(c) General eligibility.

(1) Show evidence of a high level of aeronautical knowledge in the subject areas for AMT certification in both reciprocating and turbine engine aircraft.

(2) Have held a valid AMT for five years with the ratings for which a designation is to be issued.

(3) Have been actively exercising the privileges of that AMT certificate in the previous three years.

(4) Have a good record as an AMT and a person engaged in the industry and community with a reputation for honesty and dependability.

(5) The applicant must have a fixed base of operations adequately equipped to support testing--

(i) in each subject area in a required section for the designation held, and

(ii) 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 the necessary apparatus, recommended by the aircraft manufacturers or accepted in the aviation industry, required to complete project assignments

2.6.6.2 Knowledge

(a) The applicant shall pass a pre-designation test on the following:

(1) Air Law and Regulations for AMT personnel.

(2) Current practices for the fleet of aircraft to be utilized.

(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, DME shall maintain currency by

(1) Attending initial and recurrent training conducted by the Authority, and

(2) Maintaining a current and valid AMT license and applicable ratings.

(b) The DME shall conduct at least 6 skill tests during any 12 calendar month period in order for the designation to remain current.

(c) The DME 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 DME may conduct AMT skill tests for which he/she is designated in accordance with the STS standards.

2.6.6.6 Validity

(a) The DME designation shall be valid for three years.

2.6.6.7 Renewal

(a) The DME designation may be renewed by Authority if:

(1) The need for the designation remains valid.

(2) The performance of the DME has been satisfactory.

(3) The DME has attended the DME training conducted by the Authority in the previous 12 calendar months.

2.7 AIR TRAFFIC CONTROLLER LICENCES, CATEGORIES AND RATINGS

2.7.1 APPLICABILITY

(a) This section prescribes the requirements for the issue, renewal and re-issue of an air traffic controller license and ratings.

2.7.1.1 Requirements for the Issue of the License

(a) Before issuing an air traffic controller license, the Authority shall require the applicant to meet the requirements of 2.7.1.1 and the requirements of at least one of the ratings set out in 2.7.3. Unlicensed State employees may operate as air traffic controllers on condition that they meet the same requirements.

(b) An applicant shall, before being issued with an air traffic controllers license, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that license or rating.

(c) An applicant shall for renewal or re-issue of a license, rating or authorization meet the requirements as are specified for that license, rating or authorization

2.7.2 AIR TRAFFIC CONTROLLER LICENCE AND RATINGS

2.7.2.1 Student Air Traffic Controller

(a) The Authority shall take the appropriate measures to ensure that student air traffic controllers do not constitute a hazard to air navigation.

(b) **Medical fitness**: 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.

2.7.2.2 Air Traffic Controller License

(a) Age

(1) The applicant shall be not less than 21 years of age.

(b) Knowledge

(1) The applicant shall have demonstrated a level of knowledge appropriate to the holder of an air traffic controller license, in at least the following subjects:

(i) Air law

(A) rules and regulations relevant to the air traffic controller;

(ii) Air traffic control equipment

(A) principles, use and limitations of equipment used in air traffic control;

(iii) General knowledge

(A) principles of flight; principles of operation and functioning of aircraft, engines and systems; aircraft performance relevant to air traffic control operations;

(iv) Human performance

(A) human performance including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual *(Doc 9683).*

(v) Meteorology

(A) aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;

(vi) Navigation

(A) principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and

(vii) Operational procedures

(A) Air traffic control, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

(c) Knowledge testing. An applicant for an air traffic controller license shall:

(1) Have received an endorsement for the knowledge test from an authorized 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 shall have completed an approved training course and not less than three (3) 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 will be credited as part of the experience specified in this paragraph.

(e) An air traffic controller acting as an air traffic control on-the-job training instructor shall hold an appropriate rating and be qualified as an air traffic control on-the-job training instructor.

Note. — The Procedures for Air Navigation Services — Training (Doc 9868) contains guidance on the qualification of air traffic control on-the-job training instructors and on competency-based training and assessment for air traffic controllers. The Manual on Air Traffic Controller Competency-based Training and Assessment and the Manual on Air Traffic Control On-the-Job Training Instructor Competency-based Training and Assessment (Doc 10056, Volumes I and II) provide additional guidance to support stakeholders in the successful implementation of competency-based training and assessment for air traffic controllers.

(f) **Validity.** Subject to compliance with the requirement specified in this Part, the validity period of the license is five years.

(g) **Medical fitness.** The applicant shall hold a current Class 3 medical assessment.

2.7.3 AIR TRAFFIC CONTROLLER RATINGS

2.7.3.1 Categories of air traffic controller ratings

(a) Air traffic controller ratings shall comprise the following categories:

(1) aerodrome control rating;

(2) approach control procedural rating;

(3) approach control surveillance rating;

(4) approach precision radar control rating;

(5) area control procedural rating; and

(6) area control surveillance rating.

Note. — The World Meteorological Organization has specified requirements for personnel making meteorological observations which apply to air traffic controllers providing such a service.

2.7.3.2 Requirements for Air Traffic Controller Ratings

(a) Knowledge.

(1) The applicant shall 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:

(i) *aerodrome control rating:*

(A) aerodrome layout; physical characteristics and visual aids;

(B) airspace structure;

(C) applicable rules, procedures and source of information;

(D) air navigation facilities;

(E) air traffic control equipment and its use;

(F) terrain and prominent landmarks;

(G) characteristics of air traffic;

(H) weather phenomena; and

(I) emergency and search and rescue plans;

(ii) *approach control procedural and area control procedural ratings:*

(A) airspace structure;

(B) applicable rules, procedures and source of information;

(C) air navigation facilities;

(D) air traffic control equipment and its use;

(E) terrain and prominent landmarks;

(F) characteristics of air traffic and traffic flow;

(G) weather phenomena; and

(H) emergency and search and rescue plans; and

(iii) *approach control surveillance, approach precision radar control and area control surveillance ratings:* The applicant shall meet the requirements specified in b) 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:

(A) principles, use and limitations of applicable ATS surveillance systems and associated equipment; and

(B) procedures for the provision of ATS surveillance service, as appropriate, including procedures to ensure appropriate terrain clearance.

(b) Experience.

(1) The applicant shall have:

(i) satisfactorily completed an approved training course;

(ii) provided, satisfactorily, under the supervision of an appropriately rated air traffic controller:

(A) *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;

(B) *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; and *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 Licensing 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

(iii) 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.

(2) The experience specified in 2.7.3.2 shall have been completed within the 6-month period immediately preceding application.

(3) When the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, the Licensing Authority shall determine whether the experience requirement of 2.7.3.2 can be reduced, and if so, to what extent.

(c) 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.

Note.— Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG), Chapter 3, Attachment C, in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683) and in Cir 314, Threat and Error Management (TEM) in Air Traffic Control.

(d) Concurrent issuance of two air traffic controller ratings

When two air traffic controller ratings are sought concurrently, the Licensing 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.

(e) **Knowledge testing**. An applicant for an air traffic controller rating shall:

(1) Have received an endorsement for the knowledge test from an authorized 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.

2.7.3.3 Privileges of the holder of the air traffic controller rating(s) and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in this Part, the privileges of the holder of an air traffic controller license endorsed with one or more of the undermentioned ratings shall be:

(1) **aerodrome control rating:** to provide or to supervise the provision of aerodrome control service for the aerodrome for which the license holder is rated;

(2) **approach control procedural rating:** to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the license holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

(3) **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 license holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

(i) subject to compliance with the provisions of 2.7.3.2 (3), the privileges shall include the provision of surveillance radar approaches;

(4) **approach precision radar control rating:** to provide and/or supervise the provision of precision approach radar service at the aerodrome for which the license holder is rated;

(5) **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 license holder is rated; and

(6) **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 license holder is rated.

(b) Before exercising the privileges indicated in 2.7.3.2 (f), the license holder shall be familiar with all pertinent and current information.

(c) The Authority having issued an air traffic controller license shall not permit the holder thereof to carry out instruction in an operational environment unless such holder has received proper authorization from such Authority.

(d) **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 determined by the Licensing Authority. That period shall not exceed six months. A rating shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.

(e) **Competency Checks:** No person shall act as an Air Traffic Controller unless he has, within the past twelve (12) calendar months, passed a competency check approved by the Authority and shall furnish a copy to the Authority.

(f) **Recency Requirements**

(1) An air traffic controller shall, for the purpose of meeting the requirement for recent experience in relation to a valid rating at a particular time, exercise the privileges associated with that rating for at least 10 hours within the preceding 30 days, of which at least 5 hours shall be exercised within each like-type group within that rating.

(2) Despite paragraph (a) an air traffic controller who has successfully passed a validation or re-validation assessment conducted by an Authorized Check Controller within the preceding 30 days shall be taken to have satisfied the requirement for recent experience.

(3) An air traffic controller who does not satisfy the recency requirement at a particular time in relation to an endorsement shall be taken to satisfy that requirement within the preceding 30 days, after he has undergone any retraining required by the Air Navigation Service Provider and has been assessed by the Service Provider as competent in performing the function and duties required by the relevant rating(s), or he has performed the relevant function and duties at the aerodrome or in relation to the airspace to which the endorsement relates under supervision for a period of time deemed necessary and appropriate by the Service Provider. Following a period of supervision, the controller shall be subject to an assessment of his competence before returning to operational duties.

(g) Recording of Air Traffic Controller Qualifications

The Air Navigation Service Provider shall record all qualifications in its records maintained for each Air Traffic Controller, the completion of each of the ratings and competency checks qualifications required by this Part.

(h) Monitoring of Air Traffic Controller Training and Checking Activities

(1) To enable adequate supervision of its training and checking activities, the Air Navigation Service Provider shall forward to the Authority at least 120 hours prior to the scheduled activity, the dates, report times and report location of all-

(i) Training for which a curriculum is approved; and

(ii) Competence checks.

(2) Failure to provide the information required by paragraph (k) (1) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

Note: The ATS unit shall furnish the Authority with a copy of its Training Manual not less than 30 days prior to training for which a curriculum has not been approved in the ATS unit training program, or approval by the Authority.

2.8 FLIGHT OPERATIONS OFFICER LICENCE, INSTRUCTORS, AND DESIGNATED EXAMINERS

Note: The license can also be specified as Flight Dispatcher License.

2.8.1 APPLICABILITY

(a) This section prescribes the requirements for the issue, renewal and the re-issue of a flight operations officer license, instructors for flight operations officer licenses and designation of flight operations officer examiner.

2.8.2 GENERAL

(a) An applicant shall, before being issued with a flight operations officer license, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that license.

(b) An applicant shall for renewal or re-issue of a license meet the requirements as are specified for that license.

(c) An applicant shall demonstrate the ability to read, write, speak, and understand the language of Liberia, and English if required by the Authority.

2.8.3 FLIGHT OPERATIONS OFFICER LICENCE

2.8.3.1 Requirements for the issue of the license

(a) **Age:** The applicant shall be not less than 21 years of age.

(b) **Knowledge:** The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight operations officer license, in at least the following subjects:

(1) Air law

(i) Rules and regulations relevant to the holder of a flight operations officer license; 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;

(iv) basic principles of computer-assisted planning systems;

(4) Human performance

(i) Human performance relevant to dispatch duties, including principles of threat and error management;

Note. — Guidance material to design training programs on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

(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;

(8) Principles of flight

(i) principles of flight relating to the appropriate category of aircraft; and

(9) Radio communication

(i) Procedures for communicating with aircraft and relevant ground stations.

(c) Experience: The applicant shall have gained the following experience:

(1) a total of two years of service in any one or in any combination of the capacities specified in 1) to 3) inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least one year:

(i) a flight crew member in air transportation; or

(ii) a meteorologist in an organization dispatching aircraft in air transportation; or

(iii) an air traffic controller; or a technical supervisor of flight operations officers or air transportation flight operations systems;

or

(iv) at least one year as an assistant in the dispatching of air transport;

or

(v) have satisfactorily completed a course of approved training.

(2) The applicant shall have served under the supervision of a flight operations officer for at least 90 working days within the six months immediately preceding the application.

(d) **Skill:** The applicant shall have demonstrated the ability 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 neighborhood 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 operations officer license; and

(4) recognize and manage threats and errors.

Note. — Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training *(Doc 9868, PANS-TRG), Chapter 3, Attachment C, and in Part II, Chapter 2, of the* Human Factors Training Manual *(Doc 9683).*

2.8.3.2 Privileges of the holder of the license and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in 2.2.3, the privileges of the holder of a flight operations officer license shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements specified in Annex 6, as contained in Parts 8 and 9 of these regulations.

(b) The validity period of the license is five years. A license shall become invalid when a flight operations officer has ceased to exercise the privileges of the license for a period of 6 months. A license shall remain invalid until the flight operations officer's ability to exercise the privileges of the license has been re-established.

(c) Renewal. The Flight Operations Officer License 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.

(d) Reissue. If the Flight Operations Officer License 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 2.8.3.2.

2.8.3.3 Skill Test for the Flight Operations Officer License

(a) Implementing Standard (IS) 2.8.3.2 contains the list of operations included in the Flight Operations Officer License skill test.

2.8.4 INSTRUCTORS FOR FLIGHT OPERATIONS OFFICERS

2.8.4.1 Requirements for Flight Operations Officer Instructor License

(a) Age. An applicant for Flight Operations Officer instructor license and rating shall be at least 21 years of age.

(b) Knowledge.

(1) An applicant for a Flight Operations Officer instructor license 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 Operations Officer instructor license shall hold at least a current and valid Flight Operations Officer license and have a minimum of three years' experience as a Flight Operations Officer.

(d) Privileges. The privileges of a Flight Operations Officer instructor license are to give instruction to Flight Operations Officer license 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 Operations Officer instructor license is 2 years.

(f) Renewal. A Flight Operations Officer instructor license 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 Operations Officer license; or

(2) Received refresher training acceptable to the Authority.

(g) Reissue. If the Flight Operations Officer instructor license has expired, the applicant shall have received refresher training acceptable to the Authority.

2.8.5 DESIGNATED EXAMINERS FOR FLIGHT OPERATION OFFICERS

2.8.5.1 General Requirements

(a) Age. An applicant for a Flight Operations Officer Examiner 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 Flight Operations Officer (FOO) certification.

(2) Have held a FOO license for at least five years prior to the designation.

(3) Have been actively exercising the privileges of the FOO license in commercial air transport in the previous three years.

(4) Have a good record as a FOO and a person engaged in the industry and community with a reputation for hones and dependability.

(5) Have satisfactorily completed the FOO 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 Operations Office 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 FOO 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 FOO 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 FOO examiner shall maintain currency by

(1) Attending initial and recurrent training conducted by the Authority, and

(2) Maintaining a current and valid FOO license.

(b) The FOO examiner shall conduct at least 6 skill tests during any 12 calendar month period in order for the designation to remain current.

(c) The FOO 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 FOO examiner may conduct Skill test for the Flight Operation Officer license in accordance with approved STS standard.

(b) The FOO examiner may conduct or monitor any portion of a computerized knowledge test.

2.8.5.6 Validity

(a) The FOO examiner license shall be valid for three years.

2.8.5.7 Renewal

(a) The FOO 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.

2.9 AERONAUTICAL STATION OPERATOR LICENSE

Note. — This license is not intended for personnel providing Aerodrome Flight Information Service (AFIS). Guidance on the qualifications to be met by these personnel can be found in Circular 211, Aerodrome Flight Information Service (AFIS).

2.9.1 REQUIREMENTS FOR THE ISSUE OF THE LICENSE

(a) Before issuing an aeronautical station operator license, the Authority shall require the applicant to meet the requirements of 2.9.2. Unlicensed individuals may operate as aeronautical station operators on the condition that the State from which they operate ensures that they meet the same requirements.

(b) **Age:** The applicant shall be not less than 18 years of age.

(c) **Knowledge:** The applicant shall have demonstrated a level of knowledge appropriate to the holder of an aeronautical station operator, in at least the following subjects:

(1) *General knowledge*

(i) air traffic services provided within the State;

(2) *Operational procedures*

(i) radiotelephony procedures; phraseology; telecommunication network;

(3) *Rules and regulations*

(i) rules and regulations applicable to the aeronautical station operator; and

(4) *Telecommunication equipment*

(i) principles, use and limitations of telecommunication equipment in an aeronautical station.

(d) **Experience:** The applicant 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 two months; or

(2) satisfactorily served under a qualified aeronautical station operator for not less than six months during the 12-month period immediately preceding application.

(e) **Skill:** The applicant 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.

2.9.2 PRIVILEGES OF THE AERONAUTICAL STATION OPERATOR AND THE CONDITIONS TO BE OBSERVED IN EXERCISING SUCH PRIVILEGES

Subject to compliance with the requirements specified in 2.2.3 and 2.2.4, the privileges of the holder of an aeronautical station operator license shall be to act as an operator in an aeronautical station. Before exercising the privileges of the license, the holder shall be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at that aeronautical station.

2.9.3 AERONAUTICAL METEOROLOGICAL PERSONNEL

The requirements for training and qualifications for all aeronautical meteorological personnel are the responsibility of the World Meteorological Organization (WMO) in accordance with the Working Arrangements between the International Civil Aviation Organization and the World Meteorological Organization (Doc 7475). The requirements can be found in WMO Document 1083 — Manual on the implementation of education and training standards in Meteorology and Hydrology, Volume I – Meteorology.

2.10 PARACHUTE RIGGER LICENCES, INSTRUCTORS AND DESIGNATED PARACHUTE RIGGER EXAMINERS

Note: ICAO Annex 1 does not address licenses for parachute riggers. The regulations in this subpart are based on 14 CFR Part 65 and are presented here for information for States that may be interested in developing licenses for parachute riggers.

2.10.1 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.

2.10.1.1 Eligibility Requirements: General

(a) To be eligible for a parachute rigger license, a person shall—

(b) Be at least 18 years of age.

(c) Be able to read, speak, write, and understand the Liberia language, and English if required by the Authority.

(d) Comply with the sections of this subpart that apply to the license and type rating he or she seeks.

2.10.1.2 License Required

(a) No person may pack, maintain, or alter any personnel-carrying parachute intended for emergency use in connection with civil aircraft of Liberia 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 Liberia 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 authorized representative of the Director General Office, or any Federal, State or local law enforcement officer.

(e) The following parachute rigger licenses are issued under this part:

(1) Senior parachute rigger.

(2) Master parachute rigger.

(f) Sections 2.10.1.8 through 2.10.1.11 do not apply to parachutes packed, maintained, or altered for the use of the armed forces.

2.10.1.3 Senior Parachute Rigger License—Experience, Knowledge, and Skill Requirements

(a) An applicant for a senior parachute rigger license shall—

(b) 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.

(c) Pass a knowledge test, with respect to a parachute applicable to at least one type parachute appropriate to the type rating sought, on—

(1) Construction, packing, and maintenance;

(2) The manufacturer's instructions; and

(3) The regulations of this Subpart.

(d) 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 2.10.1.3.

2.10.1.4 Master Parachute Rigger License—Experience, Knowledge, and Skill Requirements

(e) 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 2.10.1.4.

2.10.1.5 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 2.10.1.5.

(c) The holder of a senior parachute rigger license who qualifies for a master parachute rigger license is entitled to have placed on the senior parachute rigger license the ratings that were on the parachute rigger license.

2.10.1.6 Additional Type Ratings: Requirements

(a) A licensed 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.

2.10.1.7 Privileges

(a) A licensed 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 licensed 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 licensed parachute rigger need not comply with 2.10.1.8 through 2.10.1.11 (related to facilities, equipment, performance standards, records, recent experience, and seal) in packing, maintaining, or altering (if authorized) the main parachute of a dual parachute pack to be used for intentional jumping.

2.10.1.8 Facilities and Equipment

(a) No licensed parachute rigger shall exercise the privileges of his license 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.

2.10.1.9 Performance Standards and Recency Requirements

(a) No licensed 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 authorized 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 license 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.

2.10.1.10 Records

(a) Each licensed parachute rigger shall keep a record of the packing, maintenance, and alteration of parachutes performed or supervision of those activities.

(b) Each licensed 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.

2.10.1.11 Seal

(a) Each licensed 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.

2.10.1.12 Duration of Parachute Rigger License

(a) Validity: The validity period of the license is five years. A license shall become invalid when a parachute rigger has ceased to exercise the privileges of the license for a period of 6 months. A license shall remain invalid until the parachute rigger's ability to exercise the privileges of the license has been re-established.

(b) Renewal. An parachute rigger license 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 license has expired, the applicant shall have received refresher training acceptable to the Authority and pass a skill test on the areas of operations in either IS 2.10.1.3, IS 2.10.1.4, or IS 2.10.1.5, as applicable to the license and ratings to be renewed.

2.10.1.13 Display of License

(a) Each person who holds a parachute rigger 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 authorized 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 License

(a) Age. An applicant for parachute rigger instructor license and rating shall be at least 21 years of age.

(b) Knowledge.

(1) An applicant for a parachute rigger instructor license 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 license shall hold at least a current and valid parachute rigger license and ratings applicable to the instructor license sought, and have a minimum of three years' experience as a parachute rigger.

(d) Privileges. The privileges of a parachute rigger instructor license and rating are to give instruction to parachute rigger license 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 license is 2 years.

(f) Renewal. A parachute rigger instructor license 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 license; or

(2) Received refresher training acceptable to the Authority.

(g) Reissue. If the parachute rigger instructor license 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 Designated Parachute Rigger Examiner (DPRE) license 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 DPR license for at least five years prior to the designation.

(3) Have been actively exercising the privileges of the DPR for the previous three years.

(4) Have a good record as a DPR 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 STS.

(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 DPR 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 license and applicable ratings.

(b) The DPRE shall conduct at least 6 skill tests 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 computerized knowledge test.

2.10.3.6 Validity

(a) The DPRE examiner designation shall be valid for three years.

2.10.3.7 Renewal

(a) The DPRE 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 DPRE examiner has attended the DPRE examiner seminar conducted by the Authority in the previous 12-month period.

(b) The applicant shall complete all required paper work for the certification as required by the Authority.

2.11 MEDICAL PROVISIONS FOR LICENSING

Note 1. — The Standards and Recommended Practices established in this subpart cannot, on their own, be sufficiently detailed to cover all possible individual situations. Of necessity, many decisions relating to the evaluation of medical fitness must be left to the

judgment of the individual medical examiner. The evaluation must, therefore, be based on a medical examination conducted throughout in accordance with the highest standards of medical practice.

Note 2. — Predisposing factors for disease, such as obesity and smoking, may be important for determining whether further evaluation or investigation is necessary in an individual case.

Note 3. — In cases where the applicant does not fully meet the medical requirements and in complicated and unusual cases, the evaluation may have to be deferred and the case submitted to the medical assessor of the Licensing Authority for final evaluation. In such cases due regard must be given to the privileges granted by the license applied for or held by the applicant for the Medical Assessment, and the conditions under which the license holder is going to exercise those privileges in carrying out assigned duties.

Note 4. — Attention is called to the administrative clause in 2.11.1.4 dealing with accredited medical conclusion.

Note 5. — Guidance material to assist Licensing Authorities and medical examiners is published separately in the Manual of Civil Aviation Medicine (Doc 8984). This guidance material also contains a discussion of the terms "likely" and "significant" as used in the context of the medical provisions in 2.11.

Note 6. — Basic safety management principles, when applied to the medical assessment process, can help ensure that aeromedical resources are utilized effectively.

2.11.1 GENERAL

(a) As part of its State Safety Program, basic safety management principles adopted by the Authority for the medical assessment process of license holders, shall include as a minimum:

(1) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and

(2) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

(b) The Authority shall implement appropriate aviation – related health promotion activities for license holders subject to a Medical Assessment to reduce future medical risks to flight safety.

Note 1. - Guidance on the subject is contained in the Manual of Civil Aviation Medicine (Doc 8984)

Note 2.-Guidance On The Relationship Between The Authority And The Implementation Of Medical Assessment For License Holders Is Contained In The Manual Of Procedures For Establishment And Management Of A State's Personnel Licensing System (Doc 9379).

2.11.2 APPLICABILITY

This Section prescribes the requirements and procedures for issuing, renewing and reissuing Class 1, Class 2 and Class 3 medical certificates.

2.11.2.1 Medical Fitness

Note1. — Guidance material is published in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2. — To satisfy the licensing requirements of medical fitness for the issue of various types of licenses, the applicant must meet certain appropriate medical requirements which are specified as three classes of Medical Assessment. Details are given in 2.11.2, 2.11.3, 2.11.4 and 2.11.5. To provide the necessary evidence to satisfy the requirements of 2.2.4 (a), the Licensing Authority issues the license holder with the appropriate Medical Assessment, Class 1, Class 2 or Class 3. This can be done in several ways such as a suitably titled separate certificate, a statement on the license, a national regulation stipulating that the Medical Assessment is an integral part of the license, etc.

(a) An applicants for a license shall when applicable, hold a medical assessment issued in accordance with provisions of this Part.

(b) Liberia shall apply, as part of their State safety program, basic safety management principles to the medical assessment process of license holders, that as a minimum include:

(1) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and

(2) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

Note. — A framework for the implementation and maintenance of a State safety program is contained in Attachment A to Annex 19. Guidance on State safety programs and safety management principles is contained in the Safety Management Manual (SMM) (Doc 9859) and the Manual of Civil Aviation Medicine (Doc 8984).

(c) The Licensing Authority shall implement appropriate aviation-related health promotion for license holders subject to a Medical Assessment to reduce future medical risks to flight safety.

Note 1. — Standard (b) above indicates how appropriate topics for health promotion activities may be determined.

Note 2. — Guidance on the subject of health promotion activities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 3. — Guidance on the relationship between the Licensing Authority and the implementation of a Medical Assessment for license holders is contained in the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379).

(d) The period of validity of a Medical Assessment shall begin on the day the medical examination is performed. The duration of the period of validity shall be in accordance with the provisions of 2.11.1.7.

(e) The period of validity of a Medical Assessment may be extended, at the discretion of the Licensing 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.

(f) Until 2 November 2022, except as provided in Part, flight crew members or air traffic controllers shall not exercise the privileges of their license unless they hold a current Medical Assessment appropriate to the license.

(g) As of 3 November 2022, the flight crew members, remote flight crew members or air traffic controllers shall not exercise the privileges of their license unless they hold a current medical assessment appropriate to the license.

(h) The Authority shall designate medical examiners, qualified and licensed in the practice of medicine, to conduct medical examinations of fitness of applicants for the issue or renewal of the licenses or ratings specified in Chapters 2 and 3, and of the appropriate licenses specified in in this part. AMEs may be designated outside of Liberia

(i) Medical examiners 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.

(j) Medical examiners shall have practical knowledge and experience of the conditions in which the holders of licenses 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 Licensing Authority to meet this requirement.

(k) The competence of a medical examiner shall be evaluated periodically by the medical assessor.

(l) Applicants for licenses or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner 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 examiner whether a Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

(m) Any false declaration to a medical examiner made by an applicant for a license or rating shall be reported to the Licensing Authority of the issuing State for such action as may be considered appropriate.

(n) Having completed the medical examination of the applicant in accordance with this Part, the medical examiner shall coordinate the results of the examination and submit a signed report, or equivalent, to the Licensing Authority, in accordance with its requirements, detailing the results of the examination and evaluating the findings with regard to medical fitness.

(o) If the medical report is submitted to the Licensing Authority in electronic format, adequate identification of the examiner shall be established.

(p) If the medical examination is carried out by two or more medical examiners, 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.

(q) The Authority shall use the services of medical assessors to evaluate reports submitted to the Licensing Authorities by medical examiners.

(r) The medical examiner shall be required to submit sufficient information to the Licensing Authority to enable that Authority to undertake Medical Assessment audits.

Note. — The purpose of such auditing is to ensure that medical examiners meet applicable standards for good medical practice and aeromedical risk assessment. Guidance on aeromedical risk assessment is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(s) If the medical Standards prescribed in this Part for a particular license are not met, the appropriate Medical Assessment shall not be issued or renewed 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 license applied for is not likely to jeopardize flight safety;

(2) relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and

(3) the license is endorsed with any special limitation or limitations when the safe performance of the license holder's duties is dependent on compliance with such limitation or limitations.

(t) Medical confidentiality shall be respected at all times.

(u) All medical reports and records shall be securely held with accessibility restricted to authorized personnel.

(v) When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to relevant officials of the Licensing Authority.

(w) The level of medical fitness to be met for the renewal of a Medical Assessment shall be the same as that for the initial assessment except where otherwise specifically stated.

Note. — The intervals between routine medical examinations for the purpose of renewing Medical Assessments are specified in 1.2.5.2.

(x) An applicant for a license shall, when applicable, hold a Medical Assessment issued in accordance with the provisions of this part.

(y) As of 3 November 2022, except as provided Part, flight crew members or air traffic controllers shall not exercise the privileges of their license unless they hold a current Medical Assessment appropriate to the license.

2.11.2.2 Aviation Medical Examiners (AME)

(a) Subject to compliance with the requirements specified in this Part, the Authority may designate qualified and licensed physicians in the practice of medicine, to be authorized as an AME and conduct medical examinations of fitness of applicants for the issue, renewal or re-issue of the licenses or ratings specified in this Part. AMEs may be designated outside of Liberia

(b) AMEs shall have had, or shall receive initial and recurrent training in aviation medicine. Initial training shall include:

(1) Basic training in aviation medicine for Class 2 and 3 medical examinations on the subjects listed in IS 2.11.1.2. (a); and

(2) Advanced training in aviation medicine for Class 1 medical examinations on the subjects listed in IS 2.11.1.2(b).

(c) AMEs should acquire knowledge and experience of the conditions in which the holders of licenses 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 Licensing Authority to meet this requirement.

(d) The AME shall be required to submit sufficient information to the Licensing Authority to enable that Authority to undertake Medical Assessments audits.

Note. The purpose of such auditing is to ensure that medical examiners meet applicable standards for good medical practice and Aeromedical risk assessment. Guidance on Aeromedical risk assessment is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(e) The authorization of an AME is valid for 3 years. The AME shall have completed at least 10 examinations for a medical certificate per year. Renewal of the AME designation will be at the discretion of the Authority.

(f) Having completed the medical examination of an applicant in accordance with this Section, the AME shall submit a signed report to the Authority, detailing the results of the examination.

(g) If the medical examination is carried out by a constituted group of AMEs, the head of the group will be appointed by the Authority, who will be responsible for coordinating the results of the examination and signing the report.

Note: If the medical report is submitted to the Authority in electronic format, adequate identification of the examiner shall be established.

(h) The Authority retains the right to reconsider any action of an AME.

(i) The AME shall respect medical confidentiality at all times.

(j) The AME shall securely hold all medical reports and records with accessibility restricted to authorized personnel.

2.11.2.3 Decrease in Medical Fitness

(a) Holders of licenses provided for in this Annex shall not exercise the privileges of their licenses 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) The Authority shall, ensure that license holders are provided with clear guidelines on medical conditions that may be relevant to flight safety and when to seek clarification or guidance from a medical examiner or Licensing Authority.

Note.— Guidance on physical and mental conditions and treatments that are relevant to flight safety about which information may need to be forwarded to the Licensing Authority is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(c) Each Authority shall, as far as practicable, ensure that license holders do not exercise the privileges of their licenses 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.

2.11.2.4 Use of Psychoactive Substances

(a) Holders of licenses provided for in this Annex shall not exercise the privileges of their licenses 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 licenses provided for in this Annex shall not engage in any problematic use of substances.

(c) The Authority shall ensure, as far as practicable, that all license holders who engage in any kind of problematic use of substances are identified and removed from their safetycritical 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.

Note.— Guidance on suitable methods of identification (which may include biochemical testing on such occasions as pre-employment, upon reasonable suspicion, after accidents/incidents, at intervals, and at random) and on other prevention topics is contained in the Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (Doc 9654).

2.11.3 MEDICAL ASSESSMENTS — GENERAL

(a) Three classes of Medical Assessment shall be established as follows:

(1) Class 1 Medical Assessment; applies to applicants for, and holders of:

(i) commercial pilot licenses — aeroplane, airship, helicopter and powered-lift

(ii) multi-crew pilot licenses — aeroplane

(iii) airline transport pilot licenses — aeroplane, helicopter and powered-lift

(2) Class 2 Medical Assessment; applies to applicants for, and holders of:

(i) flight navigator licenses

(ii) flight engineer licenses

(iii) private pilot licenses — aeroplane, airship, helicopter and powered-lift

(iv) glider pilot licenses

(v) free balloon pilot licenses

(3) Class 3 Medical Assessment;

(i) applies to applicants for, and holders of:

(ii) air traffic controller licenses.

2.11.3.1 AVIATION MEDICAL EXAMINATIONS

(a) The applicant for a Medical Assessment shall provide the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history. 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 statement shall be dealt with in accordance with 1.2.4.6.1.

(b) The medical examiner shall report to the Licensing Authority any individual case where, in the examiner's judgment, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the license being applied for, or held, is not likely to jeopardize flight safety (1.2.4.9).

2.11.3.2 Aviation Medical Examinations

(a) Applicants for licenses or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner a declaration stating whether they have previously undergone such an examination and, if so, the date, place and results of last examination.

(b) The applicant shall indicate to the medical examiner whether a medical certificate has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

(c) Each applicant for a medical certificate shall provide the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history.

(d) Each applicant for a medical certificate shall produce proof of identification as specified in 2.2.5.5(c).

(e) Any false declaration to a medical examiner made by an applicant for a license or rating shall be reported to the Authority for such action as may be considered appropriate.

(f) The applicant shall complete the appropriate application form as prescribed by the Liberia Civil Aviation Authority.

2.11.3.3 Special Circumstances

(a) If the medical requirements prescribed in Part 2 for a particular license 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 license applied for is not likely to jeopardize flight safety;

(2) Relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and

(3) The license is endorsed by the Authority with any special limitation or limitations when the safe performance of the license holder's duties is dependent on compliance with such limitation or limitations.

(b) The AME shall report to the Authority any individual case where, in the AME's judgment, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the license being applied for, or held, is not likely to jeopardize flight safety.

2.11.3.4 Medical Certificate

(a) The medical certificate--

(1) shall be in a form and manner prescribed by the Authority. The items required on the license are indicated in IS 2.11.1.7, and

(2) carried in the possession of the personnel license holder at all times while exercising the privileges of a personnel license.

(a) 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 AME.

(ii) The issue of Class 2 and 3 medical certificates may be delegated to any authorized AME.

(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 2.11.1.4.

(b) Validity:

(1) The validity period of the medical certificate shall be:

(i) 12 months for the Class 1 for the CPL, MPL, and ATPL licenses.

(ii) 12 months for the Class 2 for the FE and FN licenses.

(iii) 60 months for the Class 2 for the PPL licenses.

(iv) 48 months for the Class 3 for the air traffic controller license.

(2) The exceptions for the validity period of the medical certificate 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 license 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.

(ii) When holders have passed their 50th birthday:

(A) The 24-month interval specified for the PPL and air traffic controller license 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.

(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 Certificate may be extended at the discretion of the Licensing Authority, up to 45 days.

Note: It is advisable to let the calendar day on which the Medical Certificate expires remain constant year after year by allowing the expiry date of the current Medical Certificate 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 Certificate but no more than 45 days before it expires.

(5) The period of validity of a medical certificate may be reduced when clinically indicated.

(c) 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 certificates may be delegated to the AME.

(3) Re-issue of the Class 1 medical certificate will either be done by the Authority or specifically delegated to an AME.

(4) Re-issue of the Class 2 and 3 medical certificates may be delegated to an AME.

(d) Limitation or denial.

(1) The Authority may, for medical reasons justified and notified to the applicant, limit or deny a medical certificate.

(e) Suspension or revocation of a medical certificate.

(1) The Authority may in accordance with paragraph 2.2.9 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.

(a) The prescribed re-examination of a license holder operating in an area distant from designated 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-

(1) A single period of 6 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 favorable medical report is obtained after examination by a designated medical examiner of the area concerned, or, in cases where such a designated medical examiner is not available, by a physician legally qualified to practice medicine in that area. A report of the medical examination shall be sent to the Authority where the license was issued; and

2.11.3.5 CIRCUMSTANCES UNDER WHICH A MEDICAL EXAMINATION MAY BE DEFERRED

(a) The prescribed re-examination of a license holder operating in an area distant from designated 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-

(1) A single period of 6 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 favorable medical report is obtained after examination by a designated medical examiner of the area concerned. A report of the medical examination shall be sent to the Authority where the license was issued; and

(3) in cases where such a designated medical examiner is not available, by a physician legally qualified to practice medicine in that area. A report of the medical examination shall be sent to the Authority.

2.11.3.6 Medical Assessor

(a) The CAA medical assessor will periodically evaluate the competence of each AME.

(b) The Authority will use the services of physicians experienced in the practice of aviation medicine when it is necessary to evaluate reports submitted to the Authority by medical examiners.

2.11.4 REQUIREMENTS FOR MEDICAL ASSESSMENTS

2.11.4.1 General

(a) An applicant for a Medical Assessment issued in accordance with the terms of 1.2.4.1 shall undergo a medical examination based on the following requirements:

(1) physical and mental;

(2) visual and color perception; and

(3) hearing.

2.11.4.2 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 sequelae from operation; or

(4) any effect or side-effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken;

(b) 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.

2.11.4.3 Visual Acuity Test Requirements

(a) The methods in use for the measurement of visual acuity are likely to lead to differing evaluations. To achieve uniformity, therefore, the Authority shall ensure that equivalence in the methods of evaluation be obtained.

(b) The following shall be adopted for tests of visual acuity:

(1) Visual acuity tests shall be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60 cd/m2).

(2) Visual acuity shall 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.

2.11.4.4 COLOR PERCEPTION REQUIREMENTS

(a) The Authority shall use such methods of examination as will guarantee reliable testing of color perception.

(b) The applicant shall be required to demonstrate the ability to perceive readily those colors the perception of which is necessary for the safe performance of duties.

(c) 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 D_{65} as specified by the International Commission on Illumination (CIE).

(d) An applicant obtaining a satisfactory result as prescribed by the Licensing 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 colors 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.

Note. — Guidance on suitable methods of assessing colour vision is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(e) Sunglasses worn during the exercise of the privileges of the license or rating held shall be non-polarizing and of a neutral grey tint.

2.11.4.5 HEARING TEST REQUIREMENTS

(a) The Authority shall use such methods of examination as will guarantee reliable testing of hearing.

(b) Applicants shall be required to demonstrate a hearing performance sufficient for the safe exercise of their license and rating privileges.

(c) Applicants for Class 1 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every five years up to the age of 40 years, and thereafter not less than once every two years.

(1) Alternatively, other methods providing equivalent results may be used.

(d) Applicants for Class 3 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every four years up to the age of 40 years, and thereafter not less than once every two years.

(1) Alternatively, other methods providing equivalent results may be used.

(e) Applicants for Class 2 Medical Assessment shall be tested by pure-tone audiometry at first issue of the Assessment and, after the age of 50 years, not less than once every two years.

(f) At medical examinations, other than those mentioned in 2.11.2.5, where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests.

Note 1. — The reference zero for calibration of pure-tone audiometers is that of the pertinent Standards of the current edition of the Audiometric Test Methods, published by the International Organization for Standardization (ISO).

Note 2.— For the purpose of testing hearing in accordance with the requirements, a quiet room is a room in which the intensity of the background noise is less than 35 dB(A).

Note 3.— For the purpose of testing hearing in accordance with the requirements, the sound level of an average conversational voice at 1 m from the point of output (lower lip of the speaker) is c. 60 dB(A) and that of a whispered voice c. 45dB(A). At 2 m from the speaker, the sound level is 6 dB (A) lower.

Note 4. — Guidance on assessment of applicants who use hearing aids is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 5.— Attention is called to 2.3.11.1 on requirements for the issue of instrument rating to applicants who hold a private pilot license.

2.11.5 CLASS 1 MEDICAL ASSESSMENT

2.11.5.1 Assessment Issue and Renewal

(a) An applicant for a commercial pilot license —aeroplane, airship, helicopter or powered-lift, a multi-crew pilot license — aeroplane, or an airline transport pilot license — aeroplane, helicopter or powered-lift shall undergo an initial medical examination for the issue of a Class 1 Medical Assessment.

(b) Except where otherwise stated in this section, holders of commercial pilot licenses — aeroplane, airship, helicopter or powered-lift, multi-crew pilot licenses — aeroplane, or airline transport pilot licenses — aeroplane, helicopter or powered-lift shall have their Class 1 Medical Assessments renewed at intervals not exceeding those specified in 2.11.1.7.

(c) When the Licensing Authority is satisfied that the requirements of this section and the general provisions of 2.11.1 and 2.11.2.1 have been met, a Class 1 Medical Assessment shall be issued to the applicant.

(d) In alternate years, for Class 1 applicants under 40 years of age, the Licensing Authority shall, at its discretion, allow medical examiners 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.

Note.— Guidance for Licensing Authorities wishing to reduce the emphasis on detection of physical disease, whilst increasing the emphasis on health education and prevention of

ill health in applicants under 40 years of age, is contained in the Manual of Civil Aviation Medicine (Doc 8984).

2.11.5.2 PHYSICAL AND MENTAL REQUIREMENTS

(a) 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.

(b) The applicant shall have no established medical history or clinical diagnosis of:

(1) an organic mental disorder;

(2) a mental or behavioral disorder due to use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances;

(3) schizophrenia or a schizotypal or delusional disorder;

(4) a mood (affective) disorder;

(5) a neurotic, stress-related or somatoform disorder;

(6) a behavioral syndrome associated with physiological disturbances or physical factors;

(7) a disorder of adult personality or behavior, particularly if manifested by repeated overt acts;

(8) mental retardation;

(9) a disorder of psychological development;

(10) a behavioral or emotional disorder, with onset in childhood or adolescence; or

(11) a mental disorder not otherwise specified;

(12) such as might render the applicant unable to safely exercise the privileges of the license applied for or held.

(c) 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 license and rating privileges.

Note 1. — Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2.— Mental and behavioral disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioral Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

(d) The applicant shall have no established medical history or clinical diagnosis of any of the following:

(1) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant's license and rating privileges;

(2) epilepsy; or

(3) any disturbance of consciousness without satisfactory medical explanation of cause.

(e) The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant's license and rating privileges.

(f) 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 license and rating privileges.

(g) An applicant who has undergone coronary bypass 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 license or rating privileges.

(h) 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 license or rating privileges.

Note. — Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(i) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

(j) Electrocardiography shall be included in re-examinations of applicants over the age of 50 no less frequently than annually.

(k) Electrocardiography shall be included in re-examinations of applicants between the ages of 30 and 50 no less frequently than every two years.

Note 1. — The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

Note 2. — Guidance on resting and exercise electro-cardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(l) The systolic and diastolic blood pressures shall be within normal limits.

(m) The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's license and rating privileges.

Note. — Guidance on the subject is contained in the Manual of Civil Aviation Medicine *(Doc 8984).*

(n) There shall be no significant functional nor structural abnormality of the circulatory system.

(o) There shall be no acute disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms during normal or emergency operations.

(p) Chest radiography shall form part of the initial examination.

Note. — Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

(q) Applicants 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 license or rating privileges.

(r) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

(s) 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 license and rating privileges.

Note. — Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(t) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(u) Applicants with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.

Note 1. — Guidance on assessment of respiratory diseases is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2. — Guidance on hazards of medications and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(v) Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(w) Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

(x) 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 obstruction due to stricture or compression, shall be assessed as unfit.

(y) 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.

(z) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their license and rating privileges shall be assessed as unfit.

(aa) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

Note.— Guidance on assessment of Type 2 insulin -treated diabetic applicants under the provisions of 2.11.1.4 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(bb) 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 license and rating privileges.

Note. — Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(cc) Applicants with diseases 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 their license and rating privileges.

Note. — Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

(dd) 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 their license and rating privileges.

(ee) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

Note. — Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(ff) Applicants with sequelae of disease of or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, 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 license or rating privileges.

(gg) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(hh) 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 license or rating privileges.

Note 1. — 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.

Note 2. — Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(ii) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(jj) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 2.11.3.2, 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.

(kk) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her license 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 license and ratings.

(ll) 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 license and rating privileges.

Note. — Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(mm) 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 license and rating privileges.

(nn) There shall be:

(1) no disturbance of vestibular function;

(2) no significant dysfunction of the Eustachian tubes; and

(3) no unhealed perforation of the tympanic membranes.

(oo) A single dry perforation of the tympanic membrane need not render the applicant unfit.

Note. — Guidance on testing of the vestibular function is contained in Manual of Civil Aviation Medicine (Doc 8984).

(pp) There shall be:

(1) no nasal obstruction; and

(2) no malformation nor any disease of the buccal cavity or upper respiratory tract

(A) which is likely to interfere with the safe exercise of the applicant's license and rating privileges.

(qq) Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

2.11.5.3 VISUAL REQUIREMENTS

(a) The medical examination shall be based on the following requirements.

(b) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor 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 license and rating privileges.

(c) 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:

(1) such correcting lenses are worn during the exercise of the privileges of the license or rating applied for or held; and

(2) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's license.

Note 1. — 2.11.3.3 (2) is the subject of Standards in Annex 6, Part I.

Note 2.— 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 Licensing 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.

(d) Applicants may use contact lenses to meet this requirement provided that:

(1) the lenses are monofocal and non-tinted;

(2) the lenses are well tolerated; and

(3) a pair of suitable correcting spectacles is kept readily available during the exercise of the license privileges.

Note. — Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

(e) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note. — If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(f) 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 Assessment and every five years thereafter.

Note 1. — The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance, and (2) to identify any significant pathology.

Note 2. — Guidance on the assessment of monocular applicants under the provisions of 2.11.1.4 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(g) 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 license and rating privileges.

(h) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 2.11.3.3, 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 correction already prescribed in accordance with 2.11.3.3; 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 license. 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 1. — N5 and N14 refer to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

Note 2. — An applicant who needs near correction to meet this requirement will require "look-over", bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

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 visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

(i) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(j) The applicant shall be required to have normal fields of vision.

(k) The applicant shall be required to have normal binocular function.

(l) 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.

2.11.5.4 HEARING REQUIREMENTS.

(a) 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.

(b) 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 the masking properties of flight deck noise upon speech and beacon signals.

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 license and ratings are valid.

Note 2. — In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

(c) Alternatively, a practical hearing test conducted in flight in the cockpit of an aircraft of the type for which the applicant's license and ratings are valid may be used.

2.11.6 CLASS 2 MEDICAL CERTIFICATE

2.11.6.1 ASSESSMENT ISSUE AND RENEWAL

(a) An applicant for a private pilot license — aeroplane, airship, helicopter or powered-lift, a glider pilot license, a free balloon pilot license, a flight engineer license or a flight navigator license shall undergo an initial medical examination for the issue of a Class 2 Medical Assessment.

(b) Except where otherwise stated in this section, holders of private pilot licenses — aeroplane, airship, helicopter or powered-lift, glider pilot licenses, free balloon pilot licenses, flight engineer licenses or flight navigator licenses shall have their Class 2 Medical Assessments renewed at intervals not exceeding those specified in 2.11.1.7.

(c) When the Licensing Authority is satisfied that the requirements of this section and the general provisions of 2.11.1 and 2.11.2.1 have been met, a Class 2 Medical Assessment shall be issued to the applicant.

2.11.6.2 PHYSICAL AND MENTAL REQUIREMENTS

(a) The medical examination shall be based on the following requirements.

(b) 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.

(c) The applicant shall have no established medical history or clinical diagnosis of:

(1) an organic mental disorder;

(2) a mental or behavioral disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;

(3) schizophrenia or a schizotypal or delusional disorder;

(4) a mood (affective) disorder;

(5) a neurotic, stress-related or somatoform disorder;

(6) a behavioral syndrome associated with physiological disturbances or physical factors;

(7) a disorder of adult personality or behavior, particularly if manifested by repeated overt acts;

(8) mental retardation;

(9) a disorder of psychological development;

(10) a behavioral or emotional disorder, with onset in childhood or adolescence; or

(11) a mental disorder not otherwise specified;

(A) such as might render the applicant unable to safely exercise the privileges of the license applied for or held.

(d) 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 license and rating privileges.

Note 1. — Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2.— Mental and behavioral disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioral Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

(e) The applicant shall have no established medical history or clinical diagnosis of any of the following:

(1) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant's license and rating privileges;

(2) epilepsy;

(3) any disturbance of consciousness without satisfactory medical explanation of cause.

(f) The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant's license and rating privileges.

(g) 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 license and rating privileges.

(h) An applicant who has undergone coronary bypass 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 license or rating privileges.

(i) 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 license or rating privileges.

Note. — Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(j) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment after the age of 40.

(k) Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less than every two years.

(l) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

Note 1. — The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

Note 2. — Guidance on resting and exercise electrocardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(m) The systolic and diastolic blood pressures shall be within normal limits.

(n) The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's license and rating privileges.

Note. — Guidance on the subject is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(o) There shall be no significant functional nor structural abnormality of the circulatory system.

(p) 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.

(q) Chest radiography shall form part of the initial and periodic examinations in cases where asymptomatic pulmonary disease can be expected.

(r) Applicants 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 license or rating privileges.

(s) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

(t) 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 license and rating privileges.

Note. — Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(u) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(v) Applicants with quiescent or healed lesions, known to be tuberculous or presumably tuberculous in origin, may be assessed as fit.

Note 1. — Guidance on assessment of respiratory diseases is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2.— Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(w) Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

(x) Applicants with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(y) 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 obstruction due to stricture or compression, shall be assessed as unfit.

(z) 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.

(aa) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their license and rating privileges shall be assessed as unfit.

(bb) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

Note.— Guidance on assessment of Type 2 insulin -treated diabetic applicants under the provisions of 2.11.1.4 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(cc) 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 license and rating privileges.

Note. — Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(dd) Applicants with diseases 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 their license and rating privileges.

Note. — Sickle cell trait and other haemoglobinopathic traits are usually compatible with fit assessment.

(ee) 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 their license and rating privileges.

(ff) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

Note. — Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(gg) Applicants with sequelae of disease of, or surgical procedures on, the kidneys or the genitourinary tract, in particular obstructions due to stricture or compression, 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 license or rating privileges.

(hh) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(ii) 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 license or rating privileges.

Note 1. — 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.

Note 2. — Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(jj) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(kk) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 2.11.4.2, 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.

(ll) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her license 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 license and ratings.

(mm) 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 license and rating privileges.

Note. — Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(nn) 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 license and rating privileges.

(oo) There shall be:

(1) no disturbance of the vestibular function;

(2) no significant dysfunction of the Eustachian tubes; and

(3) no unhealed perforation of the tympanic membranes.

(pp) A single dry perforation of the tympanic membrane need not render the applicant unfit.

Note.—Guidance on testing of the vestibular function is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(qq) There shall be:

(1) no nasal obstruction; and

(2) no malformation nor any disease of the buccal cavity or upper respiratory tract

(A) which is likely to interfere with the safe exercise of the applicant's license and rating privileges.

(rr) Applicants with stuttering and other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

2.11.6.3 VISUAL REQUIREMENTS

(a) The medical examination shall be based on the following requirements.

(1) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor 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 license 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 license 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 license.

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 Licensing 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.

(b) Applicants may use contact lenses to meet this requirement provided that:

(1) the lenses are monofocal and non-tinted;

(2) the lenses are well tolerated; and

(3) a pair of suitable correcting spectacles is kept readily available during the exercise of the license privileges.

Note. — Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each reexamination provided the history of their contact lens prescription is known.

(c) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note. — If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(d) 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 Assessment and every five years thereafter.

Note 1. — The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance, and (2) to identify any significant pathology.

Note 2. — Guidance on the assessment of monocular applicants under the provisions of 2.11.1.4 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(e) 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 license and rating privileges.

(f) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 2.11.4.3, 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 correction already prescribed in accordance with 2.11.4.3, 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 license. 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 1. — N5 refers to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

Note 2. — An applicant who needs near correction to meet the requirement will require "look-over", bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3. — Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of the reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

(g) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(h) The applicant shall be required to have normal fields of vision.

(i) The applicant shall be required to have normal binocular function.

(j) 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.

2.11.6.4 HEARING REQUIREMENTS

Note. — Attention is called to 2.3.11.1 on requirements for the issue of instrument rating to applicants who hold a private pilot license.

(a) Applicants who are unable to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner and with the back turned to the examiner, shall be assessed as unfit.

(b) 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.

(c) An applicant who does not meet the requirements in (a) or (b) shall undergo further testing in accordance with 2.11.3.3 (b).

2.11.7 CLASS 3 MEDICAL ASSESSMENT

2.11.7.1 ASSESSMENT ISSUE AND RENEWAL

(a) Until 2 November 2022, an applicant for an air traffic controller license shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

(b) As of 3 November 2022, an applicant for an air traffic controller license or remote pilot license shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

(c) Until 2 November 2022, except where otherwise stated in this section, holders of air traffic controller licenses shall have their Class 3 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

(d) As of 3 November 2022, except where otherwise stated in this section, holders of air traffic controller licenses or remote pilot licenses shall have their Class 3 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

(e) When the Licensing Authority is satisfied that the requirements of this section and the general provisions of 2.11.1 and 2.11.2.1 have been met, a Class 3 Medical Assessment shall be issued to the applicant.

2.11.7.2 PHYSICAL AND MENTAL REQUIREMENTS

(a) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable to perform duties safely.

(b) The applicant shall have no established medical history or clinical diagnosis of:

(1) an organic mental disorder;

(2) a mental or behavioral disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;

(3) schizophrenia or a schizotypal or delusional disorder;

(4) a mood (affective) disorder;

(5) a neurotic, stress-related or somatoform disorder;

(6) a behavioral syndrome associated with physiological disturbances or physical factors;

(7) a disorder of adult personality or behavior, particularly if manifested by repeated overt acts;

(8) mental retardation;

(9) a disorder of psychological development;

(10) a behavioral or emotional disorder, with onset in childhood or adolescence; or

(11) a mental disorder not otherwise specified;

(A) such as might render the applicant unable to safely exercise the privileges of the license applied for or held

(c) 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 license and rating privileges.

Note 1. — Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2.— Mental and behavioral disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioral Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements which may be useful for their application to medical assessment.

(d) The applicant shall have no established medical history or clinical diagnosis of any of the following:

(1) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant's license and rating privileges;

(2) epilepsy; or

(3) any disturbance of consciousness without satisfactory medical explanation of cause.

(e) The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant's license and rating privileges.

(f) 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 license and rating privileges.

(g) An applicant who has undergone coronary bypass 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 license and rating privileges.

(h) 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 license and rating privileges.

Note. — Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(i) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

(j) Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less frequently than every two years.

Note 1. — The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

Note 2. — Guidance on resting and exercise electrocardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(k) The systolic and diastolic blood pressures shall be within normal limits.

(l) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's license privileges.

Note. — Guidance on this subject is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(m) There shall be no significant functional nor structural abnormality of the circulatory system.

(n) 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.

(o) Applicants 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 license or rating privileges.

(p) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms shall be assessed as unfit.

(q) 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 license and rating privileges.

Note. — Guidance on hazards of medications is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(r) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(s) Applicants with quiescent or healed lesions, known to be tuberculous or presumably tuberculous in origin, may be assessed as fit.

Note 1.— Guidance on assessment of respiratory diseases is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note 2.— Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(t) Applicants with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.

(u) Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation, in particular any obstructions due to stricture or compression, shall be assessed as unfit.

(v) 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.

(w) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their license and rating privileges shall be assessed as unfit.

(x) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

Note.— Guidance on assessment of Type 2 insulin -treated diabetic applicants under the provisions of 2.11.1.4 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(y) Applicants with non-insulin-treated diabetes 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 license and rating privileges.

Note. — Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(z) Applicants with diseases 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 their license and rating privileges.

(aa) Applicants with renal or genito -urinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their license and rating privileges.

(bb) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

Note. — Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(cc) Applicants with sequelae of disease of, or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, 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 license or rating privileges.

(dd) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(ee) 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 license or rating privileges.

Note 1. — 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.

Note 2. — Guidance on the assessment of applicants who are seropositive for human immunodeficiency virus (HIV) is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(ff) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(gg) During the gestational period, precautions shall be taken for the timely relief of an air traffic controller in the event of early onset of labor or other complications.

(hh) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 2.11.4.2, the fit assessment shall be limited to the period until the end of the 34th week of gestation.

(ii) Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her license 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 license and ratings.

(jj) 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 license and rating privileges.

Note. — Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(kk) 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 license and rating privileges.

(ll) There shall be no malformation nor any disease of the nose, buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's license and rating privileges.

(mm) Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

2.11.7.3 VISUAL REQUIREMENTS

(a) The medical examination shall be based on the following requirements.

(1) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor 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 license 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 license 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 license.

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 Licensing 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.

(b) Applicants may use contact lenses to meet this requirement provided that:

(1) the lenses are monofocal and non-tinted;

(2) the lenses are well tolerated; and

(3) a pair of suitable correcting spectacles is kept readily available during the exercise of the license privileges.

Note. — Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

(c) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note. — If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(d) 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 Assessment and every five years thereafter.

Note 1. — The purpose of the required ophthalmic examination is (1) to ascertain normal vision performance, and (2) to identify any significant pathology.

Note 2. — Guidance on the assessment of monocular applicants under the provisions of 2.11.1.4 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

(e) 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 license and rating privileges.

(f) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 2.11.5.3, 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 correction already prescribed in accordance with 2.11.5.3; 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 license. 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 1. — N5 and N14 refer to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

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.

(g) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 2.11.5.3 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 correction already prescribed in accordance with 2.11.5.3; 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 license. 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 1. — N5 and N14 refer to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

Note 2. — As of 3 November 2022, 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 or remote pilot duties. However, it should be realized that single-vision near correction significantly reduces distant visual acuity.

Note 3. — As of 3 November 2022, 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 or remote pilot duties the applicant is likely to perform.

(h) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(i) The applicant shall be required to have normal fields of vision.

(j) The applicant shall be required to have normal binocular function.

(k) 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.

2.11.7.4 HEARING REQUIREMENTS

(a) 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.

(b) Until 2 November 2022, 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 experienced in a typical air traffic control working environment.

Note 1. — The frequency composition of the background noise is defined only to the extent that the frequency range 600 to 4 800 Hz (speech frequency range) is adequately represented.

Note 2. — In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

(c) As of 3 November 2022, 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 experienced in a typical air traffic control or remote pilot working environment.

Note 1. — The frequency composition of the background noise is defined only to the extent that the frequency range 600 to 4 800 Hz (speech frequency range) is adequately represented.

Note 2. — In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

(d) Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant's license and ratings are valid may be used.

2.12 GENERAL RULES CONCERNING REMOTE PILOT LICENCES AND RATINGS

2.12.1 GENERAL LICENSING SPECIFICATIONS

(a) A person shall not act either as remote pilot-in-command or as remote co-pilot of an RPA in any of the following RPA categories unless that person is the holder of a remote pilot license issued in accordance with the provisions of this chapter:

(1) aeroplane

(2) airship

(3) glider

(4) rotorcraft

(5) powered-lift

(6) free balloon.

(b) The category of RPA shall be endorsed as a category rating on the remote pilot license.

(c) An applicant shall, before being issued with any remote pilot license or rating, meet such requirements in respect of age, experience, flight instruction, competencies and medical fitness, as are specified for that remote pilot license or rating.

(d) An applicant for any remote pilot license or rating shall demonstrate, in a manner determined by the Licensing Authority, such requirements for knowledge and skill as are specified for that remote pilot license or rating.

2.12.1.1 Category ratings

(a) When established, category ratings shall be for categories of RPA listed in this Part.

(b) Category ratings shall not be endorsed on a license when the category is included in the title of the license itself.

(c) The holder of a remote pilot license seeking additional category ratings to be added to the existing license shall meet the requirements of this Annex regarding RPAS appropriate to the privileges for which the category rating is sought.

2.12.1.2 Class and type ratings

(a) A class rating shall be established for RPA and associated RPS certificated for single remote pilot operations which have comparable handling, performance and characteristics unless a type rating is considered necessary by the Licensing Authority.

(b) A type rating should be established for RPA and associated RPS certificated for operation with a minimum crew of at least two remote pilots or when considered necessary by the Licensing Authority.

Note. — Where a common type rating is established, it will be only for RPA with similar characteristics in terms of operating procedures, systems and handling.

(c) When an applicant demonstrates competencies for the initial issue of a remote pilot license, the category and the ratings appropriate to the class or type of RPA and associated RPS used in the demonstration shall be entered on that remote pilot license.

(d) The levels of performance to be achieved to operate the class or type of RPA for which the ratings are issued shall be publicly available.

2.12.1.3 Circumstances in which class and type ratings are required

(a) The Authority having issued a remote pilot license shall not permit the holder of such remote pilot license to act either as remote pilot-in-command or as remote co-pilot of an RPA and associated RPS unless the holder has received authorization as follows:

(1) the appropriate class rating specified in 2.3.14.3 (a); or

(2) a type rating when required in accordance with 2.3.14.3 (b).

(b) When a type rating is issued limiting the privileges to act as remote co-pilot, or limiting the privileges to act as remote pilot only during the cruise phase of the flight, such limitation shall be endorsed on the rating.

(c) When a class rating is issued limiting the privileges to act as remote pilot only during the cruise phase of the flight, such limitation shall be endorsed on the rating.

(d) For the purpose of training, testing, or specific special purpose non-revenue flights, special authorization may be provided in writing to the remote pilot license holder by the Licensing Authority in place of issuing the class or type rating in accordance with (a) above. This authorization shall be limited in validity to the time needed to complete the specific flight.

2.12.1.4 Requirements for the issue of class and type ratings

(a) Class rating

(1) The applicant shall have demonstrated the competencies required for the safe operations of an RPA of the class for which the rating is sought.

(b) Type rating as required by 2.3.14.3 (b)

(1) The applicant shall have:

(i) gained, under appropriate supervision, experience in the applicable type of RPA and associated RPS and/or FSTD in the following:

(A) normal flight procedures and manoeuvres during all phases of flight;
(B) abnormal and emergency procedures and manoeuvres in the event of failures and malfunctions of equipment, such as engine, C2 link, systems and airframe;
(C) instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure; and
(D) for the issue of an aeroplane category type rating, upset prevention and recovery training.

Note 1. — Procedures for upset prevention and recovery training are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

Note 2. — Guidance on upset prevention and recovery training is contained in the Manual on Aeroplane Upset Prevention and Recovery Training (Doc 10011).

Note 3. — Guidance on the approval of FSTDs for upset prevention and recovery training is contained in The Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625).

Note 4. — The aeroplane upset prevention and recovery training may be integrated in the type rating program or be conducted immediately after, as an additional module.

(E) procedures for crew incapacitation and crew coordination including allocation of remote pilot tasks; crew cooperation and use of checklists;

Note. — See 2.3.14.7 on the qualifications required for remote pilots giving RPAS training.

(2) demonstrated the competencies required for the safe operation of the applicable type of RPA and associated RPS and demonstrated C2 link management skills, relevant to the duties of a remote pilot-in-command or a remote co-pilot as applicable.

Note. — Guidance of a general nature on cross-crew qualification and cross credit is found in the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System (Doc 9379).

2.12.1.5 Use of a FSTD for acquisition of experience and demonstration of competencies

The use of a FSTD for acquiring the experience or performing any manoeuvre required during the demonstration of competencies for the issue of a remote pilot license or rating shall be approved by the Licensing Authority, which shall ensure that the FSTD used is appropriate to the task.

2.12.1.6 Circumstances in which authorization to conduct remote pilot license training is required

(a) The Authority, having issued a remote pilot license, shall not permit the holder thereof to carry out remote pilot license training required for the issue of a remote pilot license or rating, unless such holder has received proper authorization from such Contracting State. Proper authorization shall comprise:

(1) an RPAS instructor rating on the holder's remote pilot license; or

(2) the authority to act as an agent of an approved training organization authorized by the Licensing Authority to carry out remote pilot license training; or

(3) a specific authorization granted by the Authority which issued the remote pilot license.

(b) The Authority shall not permit a person to carry out remote pilot license training on a FSTD required for the issue of a remote pilot license or rating unless such person holds or has held an appropriate remote pilot license or has appropriate RPAS training and flight experience and has received proper authorization from such Authority.

2.12.1.7 Crediting of RPAS flight time

(a) A student remote pilot shall be entitled to be credited in full with all solo and dual instruction RPAS flight time towards the total flight time required for the initial issue of a remote pilot license.

(b) The holder of a remote pilot license shall be entitled to be credited in full with all dual instruction RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade.

(c) The holder of a remote pilot license shall be entitled to be credited in full with all solo or dual instruction RPAS flight time, in a new category of RPA or for obtaining a new rating, towards the total RPAS flight time required for that rating.The holder of a remote pilot license, when acting as remote co-pilot of an RPA certificated for operation by a single remote pilot but required by a Contracting State to be operated with a remote co-pilot, shall be entitled to be credited with not more than 50 per cent of the remote co-pilot RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade. The Contracting State may authorize that RPAS flight time be credited in full towards the total RPAS flight time required if the RPAS is equipped to be operated by a remote co-pilot and is operated in a multi-crew operation.

(d) The holder of a remote pilot license, when acting as remote co-pilot of an RPA certificated to be operated with a remote co-pilot, shall be entitled to be credited in full with this RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade.

(e) The holder of a remote pilot license, when acting as remote pilot-in-command under supervision, shall be entitled to be credited in full with this RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade.

(f) When applying for a new rating, the holder of a remote pilot license shall be entitled to be credited with RPAS flight time experience as a remote pilot of RPA. The Licensing Authority shall determine whether such experience is acceptable and, if so, the extent to which the experience requirements for the issue of a rating can be reduced accordingly.

Note. — The total RPAS flight time required is derived from the approved competency-based training program.

2.12.1.8 Limitation of privileges of remote pilots who attain their 60th birthday and curtailment of privileges of remote pilots who attain their 65th birthday

The Authority, having issued remote pilot licenses, shall not permit the holders thereof to act as pilot of an RPAS engaged in international commercial air transport operations if the license holders have attained their 60th birthday or, in the case of operations with more than one pilot, their 65th birthday.

2.12.1.9 Student remote pilot

(a) A student remote pilot shall meet requirements prescribed by the Contracting State concerned. In prescribing such requirements, Contracting States shall ensure that the privileges granted would not permit student remote pilots to constitute a hazard to air navigation.

(b) A student remote pilot shall not fly an RPA solo unless under the supervision of, or with the authority of, an authorized RPAS instructor.

(c) A student remote pilot shall not fly an RPA solo on international RPAS operations unless by special or general arrangement between the Contracting States concerned.

2.12.1.10 Medical fitness

The Authority shall not permit a student remote pilot to fly an RPA solo unless he/she holds a current Class 3 or a current Class 1 Medical Assessment.

Note. — A Class 1 medical assessment may be essential for a particular individual based on their work environment and responsibilities in the context of a specific RPAS application.

2.12.2 REMOTE PILOT LICENSE

Note. — The provisions of this part are for international IFR operations of RPAS.

2.12.2.1 General requirements for the issue of the remote pilot license

(a) Age

The applicant shall not be less than 18 years of age.

(b) Knowledge

(1) The applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a remote pilot license and appropriate to the category of RPA and associated RPS intended to be included in the remote pilot license, in at least the following subjects:

(2) Air law

(i) rules and regulations relevant to the holder of a remote pilot license; rules of the air; appropriate air traffic services practices and procedures;

(ii) rules and regulations relevant to flight under IFR; related air traffic services practices and procedures;

(3) General RPAS knowledge

(i) principles of operation and the functioning of engines, systems and instruments;

(ii) operating limitations of the relevant category of RPA and engines; relevant operational information from the flight manual or other appropriate document;

(iii) use and serviceability checks of equipment and systems of appropriate RPA;

(iv) maintenance procedures for airframes, systems and engines of appropriate RPA;

(v) for rotorcraft and powered-lifts, transmission (power trains) where applicable;

(vi) use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of an RPA under IFR and in instrument meteorological conditions;

(vii) flight instruments; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;

(viii) for airships, physical properties and practical application of gases;

(ix) RPS general knowledge:

(A) principles of operation and function of systems and instruments;
(B) use and serviceability checks of equipment and systems of appropriate RPS;
(C) procedures in the event of malfunctions;

(x) C2 link general knowledge:

(aa) different types of C2 links and their operating characteristics and limitations;

(bb) use and serviceability checks of C2 link systems;

(cc) procedures in the event of C2 link malfunction;

(xi) detect and avoid capabilities for RPAS;

(4) Flight performance, planning and loading

(A) effects of loading and mass distribution on RPA handling, flight characteristics and performance; mass and balance calculations;
(B) use and practical application of take-off, landing and other performance data;
(C) pre-flight and en-route flight planning appropriate to RPAS operations under IFR; preparation and submission of air traffic services flight plans under IFR; appropriate air traffic services procedures; altimeter setting procedures;
(D) in the case of airships, rotorcraft and powered-lifts, effects of external loading on handling;

(5) Human performance

Human performance relevant to RPAS and instrument flight, including principles of TEM;

Note. — Guidance material to design training programs on human performance, including TEM, can be found in the Human Factors Training Manual (Doc 9683).

(6) 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 with respect to the elements having an effect on 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;

(iv) in the case of rotorcraft and powered-lifts, effects of rotor icing;

(v) in the case of high altitude operations, practical high altitude meteorology, including interpretation and use of weathers reports, charts and forecasts; jetstreams;

(7) 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 RPAS equipment;

(ii) use, limitation and serviceability of avionics and instruments necessary for control and navigation;

(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 RPAS equipment;

(8) Operational procedures

(i) application of TEM to operational performance;

Note. — Guidance material on the application of TEM is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) and in the Human Factors Training Manual (Doc 9683).

(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) altimeter setting procedures;

(iv) appropriate precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria;

(v) operational procedures for carriage of freight; potential hazards associated with dangerous goods and their management;

(vi) requirements and practices for safety briefings to remote flight crew members

(vii) in the case of rotorcraft, 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;

(viii) operational procedures for handovers and coordination;

(ix) operational procedures for normal and abnormal C2 link operations;

(9) Principles of flight

(i) Principles of flight; and

(10) Radiotelephony

(i) Communication procedures and phraseology; action to be taken in case of communication failure.

(c) Skill

(1) The applicant shall have demonstrated all the competencies of the adapted competency model approved by the Licensing Authority at the level required, to act as remote pilot in command of an RPAS operation within the appropriate category of RPA and associated RPS.

Note.— Guidance material on the ICAO competency framework and on the methodology to adapt the ICAO competency framework for remote pilots and develop the related competency-based training programme is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

(2) If the privileges of the remote pilot are to be exercised on a multi-engined RPA, the applicant shall have demonstrated the ability to operate under IFR with degraded propulsion capabilities.

(d) Medical fitness

The applicant shall hold a current Class 3 Medical Assessment or a current Class 1 Medical Assessment.

Note. — A Class 1 Medical Assessment may be essential for a particular individual based on their work environment and responsibilities in the context of a specific RPAS application.

2.12.2.2 Privileges of the holder of the remote pilot license and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in 2.2.5 (a), 2.2.6 (a), 2.2.7 (a), 2.2.9 (a) and 2.3.14, the privileges of the holder of a remote pilot license shall be:

(1) to act as remote pilot-in-command of an RPA and associated RPS, certificated for remote single-pilot operation;

(2) to act as remote co-pilot of an RPA and associated RPS, required to be operated with a remote co-pilot;

(3) to act as a remote pilot-in-command of an RPA and the associated RPS, required to be operated with a remote co-pilot; and

(4) to act either as remote pilot-in-command or as remote co-pilot of an RPAS under IFR.

(b) Before exercising the privileges at night, the remote pilot license holder shall have received dual instruction in an RPA and associated RPS in night flying, including take-off, landing and navigation.

Note. — Certain privileges of the remote pilot license are curtailed by 2.3.14.9 for remote pilot license holders when they attain their 60th and 65th birthdays.

2.12.2.3 Specific requirements for the issue of remote pilot license

Experience: The applicant shall have gained experience during training in operating the RPA and associated RPS to successfully demonstrate the competencies required in 2.3.14.13.

2.12.2.4 Remote pilot license training

(a) In order to meet the requirements of the remote pilot license, the applicant shall have completed an approved training course. The training shall be competency-based and, if applicable, conducted in a multi-crew operational environment.

(b) During the training, the applicant shall have acquired the competencies and underpinning skills required for performing as a remote pilot of an RPA certificated for operation under IFR.

(c) The applicant shall have received dual remote pilot license training in an RPA and associated RPS, sought from an authorized RPAS instructor. The RPAS instructor shall ensure that the applicant has operational experience in all phases of flight and the entire operating envelope of an RPAS, including abnormal and emergency conditions, upset prevention and recovery training for the categories concerned, as well as IFR operations.

(d) If the privileges of the remote pilot are to be exercised on a multi-engined RPA, the applicant shall have received dual instrument remote pilot license training in a multi-engined RPA within the appropriate category from an authorized RPAS instructor. The RPAS instructor shall ensure that the applicant has operational experience in the operation of the RPA within the appropriate category with engines inoperative or simulated inoperative.

2.12.3 RPAS INSTRUCTOR RATING

2.12.3.1 Requirements for the issue of the rating

(a) Knowledge

(1) The applicant shall demonstrate the ability to effectively assess trainees against the adapted competency model used in the approved training program.

(2) The applicant shall successfully complete the training and meet the qualifications of an approved training organization appropriate to the delivery of competency-based training programs.

(3) The RPAS instructor training program shall focus on the development of competence in the following specific areas:

(i) the adapted competency model of the remote pilot training program according to the defined grading system used by the RPAS operator or approved training organization;

(ii) in accordance with the assessment and grading system of the RPAS operator or approved training organization, making assessments by observing behaviors; gathering objective evidence regarding the observable behaviors of the adapted competency model used;

(iii) recognizing and highlighting performance that meets competency standards;

(iv) determining root causes for deviations below the expected standards of performance; and

(v) identifying situations that could result in unacceptable reductions in safety margins.

(4) The applicant shall have met the competency requirements for the issue of a remote pilot license as appropriate to the category of RPA and associated RPS.

(5) In addition, the applicant shall have demonstrated a level of competency appropriate to the privileges granted to the holder of an RPAS instructor rating, in at least the following areas:

(i) techniques of applied instruction;

(ii) assessment of student performance in those subjects in which ground instruction is given;

(iii) the learning process;

(iv) elements of effective teaching;

(v) competency-based training principles, including student assessments;

(vi) evaluation of the training program effectiveness;

(vii) lesson planning;

(viii) classroom instructional techniques;

(ix) use of training aids, including FSTDs as appropriate;

(x) analysis and correction of student errors;

(xi) human performance relevant to RPAS, instrument flight and remote pilot license training, including principles of TEM; and

Note. — Guidance material to design training programs on human performance, including TEM, can be found in the Human Factors Training Manual (Doc 9683).

(xii) hazards involved in simulating system failures and malfunctions in the aircraft.

(b) Skill

(1) The applicant shall have successfully performed a formal competency assessment, prior to conducting instruction and assessment within a competency-based training program.

(2) The competency assessment shall be conducted during a practical training session in the category of RPA and associated RPS for which RPAS instructor privileges are sought, including pre-flight, post-flight and ground instruction as appropriate.

(3) The competency assessment shall be conducted by a person authorized by the Licensing Authority.

(c) Experience

(1) The applicant shall have met the requirements for the issue of a remote pilot license, shall maintain competencies and meet the recent experience requirements for the license.

(2) The applicant shall have sufficient training and experience to attain the required level of proficiency in all of the required tasks, manoeuvres, operations and principles, and methods of instruction relevant to 2.3.16.4.

(d) Remote pilot license training.

(1) The applicant shall, under the supervision of an RPAS instructor authorized by the Licensing Authority for that purpose:

(i) have received training in RPAS instructional techniques including demonstration, student practices, recognition and correction of common student errors; and

(ii) have practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide remote pilot license training.

2.12.3.2 Privileges of the holder of the rating and the conditions to be observed in exercising such privileges

(a) Subject to compliance with the requirements specified in 2.2.5 and 2.3.14, the privileges of the holder of an RPAS instructor rating shall be:

(1) to supervise solo flights by student remote pilots; and

(2) to carry out remote pilot license training for the issue of a remote pilot license and an RPAS instructor rating provided that the RPAS instructor:

(i) holds at least the remote pilot license and rating for which instruction is being given, in the appropriate RPA category and associated RPS;

(ii) holds the remote pilot license and rating necessary to act as the remote pilot-in-command of the RPA category and associated RPS on which the instruction is given; and

(iii) has the RPAS instructor privileges granted endorsed on the remote pilot license.

(b) The applicant, in order to carry out remote pilot license training in a multi crew operational environment, shall have also met all the instructor qualification requirements.

2.13 CABIN CREWMEMBERS

2.13.1 APPLICABILITY

This Subpart prescribes the requirements for the issuance of a cabin crew member certificate, the conditions under which those certificates and ratings are necessary, and the limitations of those certificates and ratings.

2.13.2 CABIN CREW MEMBER ELIGIBILITY REQUIREMENTS

To be eligible for a cabin crew member Certificate, a person shall—

(a) Be at least 18 years of age.

(b) Have a minimum demonstrated language proficiency in English; and

(c) Have a valid Class 2 medical certificate.

2.13.3 CABIN CREW MEMBER KNOWLEDGE REQUIREMENTS

The applicant for a cabin crew member certificate must complete the training requirements of Part 3 and 8 of these Flight Standards Regulations with an AOC or an ATO holder.

2.13.4 CABIN CREW MEMBER EXPERIENCE REQUIREMENTS

The applicant for a cabin crew member certificate must complete the experience requirements of Part 8 of these Flight Standards Regulations with an AOC holder.

2.13.5 CABIN CREW MEMBER SKILL REQUIREMENTS

The applicant for a cabin crew member certificate shall complete the drills and competency checks required by Part 8 of these -Regulations with an AOC holder.

2.13.6 CABIN CREW MEMBER

Instructor Authorization The applicant for a Cabin Crew Member Instructor's Authorization shall satisfy the following requirements:

(a) Holds the Cabin Crew Member certificate and rating required to serve as lead Cabin Crew Member.

(b) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training, that are required to serve as lead Cabin Crew Member.

(c) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a Cabin Crew

(d) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check; and

(e) Holds at least a Cabin Crew Member medical certificate.

2.13.7 CHECK CABIN CREW MEMBER AUTHORIZATION

No AOC holder may use a person, nor may any person serve as a check cabin crew member in an established training program unless, with respect to the aircraft type unless that person:

(a) Holds a valid competency certificate;

(b) Has acted at least five (5) years as a lead cabin crew member;

(c) Has satisfactorily completed the appropriate training phases for the aircraft type including recurrent training required to serve as a check cabin crew member;

(d) Has satisfactorily completed the appropriate competency and on board experience check observed by the Authority;

(e) Holds a valid cabin crew member class 2 medical certificate: and

(f) Has been approved by the Authority.

2.13.8 CABIN CREW MEMBER EXAMINER AUTHORIZATION

An applicant for Cabin Crew Member Examiner Authorization shall satisfy the following requirements:

(a) Hold Cabin Crew Member certificate and has completed for the AOC holder all applicable training, qualification and currency requirements of this Part applicable to the Cabin Crew Member position being checked.

(b) Holds the Cabin Crew Member certificate or license and has completed all applicable training, qualification and line observation requirement of this Part applicable to the Cabin Crew position being checked;

(c) Completed emergency evacuation training with AOC holder

LIBERIA CIVIL AVIATION AUTHORITY
FLIGHT SAFETY STANDARD REGULATION

Part 2 — IMPLEMENTING STANDARDS

For ease of reference the number assigned to each implementing standard corresponds to its associated regulation. For example IS: 2.2.2 would reflect a standard required in subsection 2.2.2.

IS 2.2.2 Language Proficiency

(a) General

(1) To meet the language proficiency requirements contained in 2.2.2, an applicant for a license or a license 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.

(b) Holistic descriptors: Proficient speakers shall:

(1) Communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;

(2) Communicate on common, concrete and work-related topics with accuracy and clarity;

(3) Use appropriate communicative strategies to exchange messages and to recognize and resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or work-related context;

(4) 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

(5) Use a dialect or accent which is intelligible to the aeronautical community.

(c) Rating scale:

(1) Pre-elementary Level (Level 1):

(i) Pronunciation: Performs at a level below the Elementary Level.

(ii) Structure: Performs at a level below the Elementary Level.

(iii) Vocabulary: Performs at a level below the Elementary Level.

(iv) Fluency: Performs at a level below the Elementary Level.

(v) Comprehension: Performs at a level below the Elementary Level.

(vi) Interactions: Performs at a level below the Elementary Level.

(2) Elementary Level (Level 2):

(i) Pronunciation: Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.

(ii) Structure: Shows only limited control of a few simple memorized grammatical structures and sentence patterns.

(iii) Vocabulary: Limited vocabulary range consisting only of isolated words and memorized phrases.

(iv) 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.

(v) Comprehension: Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.

(vi) Interactions: Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.

(3) Pre-operational Level (Level 3):

(i) Pronunciation: Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.

(ii) Structure: Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.

(iii) 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.

(iv) 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.

(v) 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.

(vi) 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 license (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 license (or certificate) on active flying status in an armed force of Liberia.

(c) Aircraft category, class and type ratings. The Authority may issue to the holder of a military pilot license (or certificate) an aircraft category, class or type rating to a commercial pilot license if the pilot present documentary evidence that shows satisfactory accomplishment of:

(1) A military pilot check and instrument proficiency check of Liberia 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 license (or certificate) may apply for an aeroplane or helicopter instrument rating to be added to his or her commercial pilot license 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 Liberia in the aircraft category for the instrument rating sought; and

(2) Received authorization from an armed force of Liberia 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 license. The Authority may issue to the holder of a military pilot license (or certificate) who holds an airline transport pilot license 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 license level; and

(2) Passed an official military pilot of Liberia 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 Liberia:

(3) At least one of the following:

(i) An order of an armed force of Liberia 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 Liberia 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 Liberia.

(5) An official armed force of Liberia 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 2.2.4.3 Procedures for Validation of Flightcrew Licenses by Reliance upon the Licensing System of Another Contracting State

(a) The Authority should, before making the agreement mentioned in 2.2.4.3 (a)(3) be convinced, that the other Contracting State issues licenses 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 Liberia, or from another Contracting State delegated by the Authority of Liberia, 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 of Liberia. 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 Liberia 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 Liberia 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 form can be obtained from the Authority.

IS 2.2.4.4 Procedures for Conversion of Flightcrew Licenses by Reliance upon the Licensing System of Another Contracting State

(a) The Authority that issues a converted license based on a license from another Contracting State remains responsible for the converted license.

(b) The Authority should, before making the agreement mentioned in 2.2.4.4 (a)(3) be convinced, that the other Contracting State issues licenses 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 Liberia, or from another Contracting State delegated by the Authority of Liberia, 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 of Liberia. 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 Liberia 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 Liberia and the other Contracting State.

(d) Renewal and re-issue of converted licenses and ratings:

(1) When examiners are available in Liberia to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the license or rating(s), these tests/checks will be performed by the authorized examiners of Liberia;

(2) When examiners are not available in Liberia to perform proficiency checks for the renewal of the rating(s) or skill test for the re-issue of the license 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 license from another Contracting State shall be done by submitting to the Authority a properly filled out form, which form 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.

IS 2.2.4.9 Procedures for Validation of AMT Licenses by Reliance upon the Licensing System of Another Contracting State

(a) The Authority should, before making the agreement mentioned in 2.2.4.9 (a)(3) be convinced, that the other Contracting State issues licenses 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 Liberia, or from another Contracting State delegated by the Authority of Liberia, 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 of Liberia. 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 Liberia is different from the Air Law system from the other Contracting State. The knowledge test may also include Liberia airworthiness requirements governing certification and continuing airworthiness, and approved maintenance organizations 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 Procedures for Conversion of AMT Licenses by Reliance upon the Licensing System of Another Contracting State

(a) The Authority that issues a converted license based on a license from another Contracting State remains responsible for the converted license.

(b) The Authority should, before making the agreement mentioned in 2.2.4.10 (a)(3) be convinced, that the other Contracting State issues licenses 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 Liberia, or from another Contracting State delegated by the Authority of Liberia, 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 of Liberia. 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 Liberia is different from the Air Law system from the other Contracting State. The knowledge test may also include Liberia airworthiness requirements governing certification and continuing airworthiness, and approved maintenance organizations and procedures if those regulations are different from the Contracting State.

(d) Renewal and re-issue of converted licenses and ratings:

(1) when examiners are available in Liberia to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the license or rating(s), these tests/checks will be performed by the authorized examiners of Liberia;

(2) when examiners are not available in Liberia to perform proficiency checks for the renewal of the rating(s) or skill test for the re-issue of the license 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 license from another Contracting State shall be done by submitting to the Authority a properly filled out form, which form can be obtained from the Authority.

IS 2.2.8 Specifications and Format of the License

(a) The following details shall appear on the license and the numbering scheme shall be in Roman numerals.

(i) Name of Liberia (in bold type);

(ii) Title of license (in very bold type)

(iii) Serial number of the license, in Arabic numerals, given by the authority issuing the license;

(iv) Name of holder in full;

(Iva) Date of birth;

(v) Address of holder;

(vi) Nationality of holder;

(vii) Signature of holder;

(viii) Authority and, where necessary, conditions under which the license is issued;

(ix) Certification concerning validity and authorization for holder to exercise privileges appropriate to the license;

(x) Signature of officer issuing the license and the date of such issue;

(xi) Seal or stamp of authority issuing the license;

(xii) Ratings, (e.g. Category, class, type of aircraft, airframe, aerodrome control, etc.);

(xiii) 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);

(xiv) Any other details desired by the State issuing the license.

(b) The privileges and ratings shall be clearly identified on the license in items (a) (IX) and (XII).

Note: Item (VI) Nationality is presumed to be citizenship of the license holder.

IS 2.3.1.7 Recording of Flight Time

(a) The details in the records of flights flown as pilot shall contain the items in (b) and (c) below.

(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:

(i) Name of the holder.

(ii) Address of the holder.

(2) For each flight:

(i) Name of PIC.

(ii) Date of flight.

(iii) Place and time of departure and arrival.

(iv) 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.

(2) 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 license 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 authorized instructor may log as PIC time all of the flight time while acting as an authorized 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 authorized 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 authorized instructor.

IS 2.3.2.5 Category II and III Authorization

(a) The Authority will issue a Category II or Category III pilot authorization by letter, as a part of an applicant's instrument rating or airline transport pilot certificate.

(b) Upon original issue the authorization 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 authorization document.

(c) To remove the limitations on a Category II or Category III pilot authorization—

(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 authorization.

(d) An authorization holder or an applicant for an authorization 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 authorization, as applicable.

(e) Category II: skill test requirements.

(1) An applicant for the following authorizations shall pass a skill test:

(i) Issuance or renewal of a Category II pilot authorization.

(ii) The addition of another type aircraft to a Category II pilot authorization.

(2) To be eligible for the skill test for an authorization 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 authorization during the 12 calendar months preceding the month of the test—

(iii) Meet the requirements of 8.4.10; 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 authorized for Category II operations;

(iii) To the decision height authorized 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 authorization 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 authorization 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 authorization 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 authorization 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 authorization 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 authorization 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 authorization.

(ii) The addition of another type of aircraft to a Category III pilot authorization.

(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 authorization during the 12 calendar months preceding the month of the test—

(A) Meet the requirements of 8.4.10 and 8.10.20, 8.10.32.; 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 authorized for Category III operations;

(iv) To the alert height or decision height, as applicable, authorized 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 authorization 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 authorization 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 authorization 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 authorization 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 authorization 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 authorization 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.

IS 2.3.3 Student Pilots

(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 auto rotational descents with a power recovery and power recovery to hover.
(16) Rapid decelerations.
(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 License

IS 2.3.4.2 PPL Skill Test—Aeroplane Category

(a) The skill test for the single-engine and multi-engine private pilot license – 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) Licenses 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 license - 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) Licenses 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 license- 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 license – 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 license—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) Licenses 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 license - 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) Licenses 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) Pressurization.

(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 CPL Skill Test—Helicopter Category

(a) The skill test for the commercial pilot license – 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) Licenses 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 CPL Skill Test—Powered-Lift Category

(a) Reserved.

IS 2.3.5.5 CPL Skill Test—Airship Category

(a) The skill test for the commercial pilot license – airship shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Technical subjects, including the applicant's knowledge and performance of the following tasks—

(ii) Aeromedical factors.

(iii) Visual scanning and collision avoidance.

(iv) Use of distractions during flight training.

(v) Principles of flight.

(vi) Airship weight-off, ballast, and trim.

(vii) Night operations.

(viii) Regulations and publications.

(ix) National airspace system.

(x) Logbook entries and license endorsement.

(2) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(i) Licenses 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 takeoff.

(v) Ground handling.

(vi) Before takeoff 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 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.

(9) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(i) Masting.

(ii) Post-masting.

IS 2.3.5.6 CPL Skill Test—Balloon Category

(a) The skill test for the commercial pilot license – 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 license endorsement.

(2) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(i) Licenses 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 CPL Skill Test—Glider Category

(a) The skill test for the commercial pilot license – 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) Licenses 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-aerodrome landing.

(ii) Emergency equipment and survival gear.

Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(i) After-landing and securing.

IS 2.3.6.2 Multi-crew Pilot License Skill Test – Aeroplane Category

(a) The skill test for the multicrew pilot license 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.

IS 2.3.7.2 ATPL and Aircraft Type Rating Skill Test—Aeroplane Category

(a) The skill test for the airline transport pilot license - 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.

IS 2.3.7.3 ATPL and Aircraft Type Rating Skill Test—Helicopter Category

(a) The skill test for the airline transport pilot license 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 takeoff.
(ii) Instrument takeoff.
(iii) Powerplant failure during takeoff.
(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) Postflight procedures; including the applicant's knowledge and performance of the following tasks—

(i) After landing procedures.
(ii) Parking and securing.

IS 2.3.7.4 ATPL and Aircraft Type Rating Skill Test—Powered-Lift Category

(a) Reserved.

IS 2.3.8.2 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.

IS 2.3.9.2 Flight Instructor Skill Test and Proficiency Check

(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—

(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) 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 license 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) Licenses 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 trims 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 license endorsements.

(3) Preflight preparation including the applicant's knowledge and performance of the following tasks—

(i) Licenses 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 license endorsement.

(3) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(i) Licenses 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 license 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 license endorsement.

(3) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

(i) Licenses 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—
(xii) 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 license endorsements.

(3) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

(i) Licensees 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 behavior 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 liftoff.

(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 centerline.

(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) Familiarization 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.

IS 2.3.10.1 Skill Test for Designated Pilot Examiners

(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 license or rating.

(i) The Authority will arrange for the pilot examiner applicant to conduct a skill test for an actual pilot applicant for a license 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 license 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 recognizes 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.

IS 2.4.4.4 Flight Engineer: Skill Test and Proficiency Check

(a) The skill test and proficiency check for the flight engineer license 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.

IS 2.4.6.2 Skill Test for Designated Flight Engineer Examiners

(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 license 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 license 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 license 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 recognizes 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.

IS 2.5.4.2 Flight Navigator License: Skill Test and Proficiency Check

(a) The skill test and proficiency check for the flight navigator license 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) Star identification (pointer system);

(2) Use of star finder;

(3) Shots against pre-computed curve;

(4) 3-star fix or LOP of sun;

(5) Compensation and swinging of compass;

(6) Alignment of drift meter;

(7) Alignment of astro-compass or periscopic sextant;

(8) Interpretation of weather data;

(9) Preparation of flight plan;

(10) Computation of fuel load;

(11) Determination of PNR and equitime point;

(12) Preparation of cruise control chart;

(13) Use and interpretation of cruise control chart;

(14) Equipment check;

(15) Location of emergency equipment;

(16) Knowledge of emergency equipment;

(17) Use of flux-gate and gyrosyn compasses;

(18) Setting and altering course;

(19) Chart knowledge – sectional or WAC chart;

(20) Pilotage;

(21) Computer computation ability;

(22) Determine of track, ground speed, and wind by double drift;

(23) Determine of ground speed and wind by drift meter timing;

(24) Air plots;

(25) ETA's;

(26) Knowledge and use of radio facilities;

(27) Care in turning;

(28) Station identification;

(29) Use of manual loop;

(30) Evaluation of radio bearings;

(31) Correction and plotting of radio bearings;

(32) Diversion to alternate – computer compass heading, ETA, fuel remaining;

(33) Basic adjustments of Loran Receiver;

(34) Knowledge and use of Loran;

(35) Knowledge and use of consol method;

(36) Use of absolute altimeter;

(37) Determination of ":D" factor;

(38) Determination of drift by altimetry;

(39) Interpretation and application of altimeter data;

(40) Single LOP interpretation (radio, press)

(41) Single LOP approach;

(42) Use of astro-compass;

(43) Determination of compass deviation;

(44) Accuracy of celestial fixes;

(45) Selection of bodies for observation;

(46) Handling of routine reports;

(47) Log entries;

(48) Weather observations and interpretation in flight;

(49) Determination of wind from fixes;

(50) Estimates for letdown;

(51) Over-all speed;

(52) Over-all accuracy;

(53) Alertness;

(54) Co-ordination of navigation methods;

(55) Co-ordination of duties with time.

(b) The areas of operation may be accomplished as follows:

(1) Items 1 through 7 above may be accomplished on the ground.

(2) Items 8 through 54 may be accomplished in flight.

(3) Items 17, 22, 23, 33, 34, 35, 36, 37, 38, 39 may be completed by oral questioning when a lack of ground facilities or navigation equipment makes such procedures necessary.

IS 2.5.6.2 Skill Test for Designated Flight Navigator Examiner

(a) The skill test for initial designation and renewal of a flight navigator examiner 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 navigator 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 navigator examiner applicant testing an actual flight navigator applicant for a license or proficiency check.

(i) The Authority will arrange for the flight navigator examiner applicant to conduct a skill test for an actual flight navigator applicant for a license or proficiency check, 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 navigator examiner applicant's performance while the flight navigator examiner applicant evaluates the flight navigator license or proficiency check applicant.

(iii) Any discussion between the flight navigation examiner applicant and the Authority inspector concerning the flight navigator examiner applicant's performance with the flight navigator applicant will be held in private.

(iv) At the conclusion of the skill test for the actual flight navigator license or proficiency check:

(A) If the applicant has passed the skill test or proficiency check, 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 or proficiency check, the Authority inspector will complete and sign the appropriate document needed.

(2) Authority inspector playing the role of flight navigator applicant for a skill test.

(i) The Authority inspector will play the role of a flight navigator applicant for a skill test appropriate to the designation the flight navigator examiner applicant is seeking.

(ii) If the Authority inspector answers a question incorrectly to test whether the flight navigator examiner applicant recognizes an incorrect answer, the incorrect response must be obviously wrong.

(3) Authority inspector gives a flight skill test to the flight navigator examiner applicant.

(i) The Authority inspector will test the flight navigator examiner applicant on selected manoeuvres in order to assess the flight navigator examiner applicant's flight proficiency and ability to evaluate a flight navigator applicant in accordance with the appropriate skill test or proficiency check.

(ii) The Authority inspector will evaluate the flight navigator examiner applicant's plan of action for completeness and efficiency.

IS 2.6.2.7 Aircraft Maintenance Technician Skill Requirements

(a) Each applicant for an Aviation Maintenance Technician (AMT) license 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) **AMT General.** The skill test for the AMT License 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) **AMT Airframe Rating.** The skill test for the airfraoperation:

(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.

(d) AMT 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.

(e) AMT 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 – auto flight.

(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.

IS 2.8.3.2 Skill Test for the Flight Operations Officer License

(a) The skill test for the flight operations officer license 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 2.10.1.3 Senior Parachute Rigger License Skill Test

(a) The skill test for the senior parachute rigger license 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.

IS 2.10.1.4 Master Parachute Rigger License Skill Test

(a) The skill test for the master parachute rigger license 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.

IS 2.10.1.5 Type Ratings—Parachute Rigger License Skill Test

(a) The skill test for ratings or added ratings to a parachute rigger license 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.

IS 2.11.1.2 Aviation Medical Examiners

(a) Basic training in aviation medicine for AMEs 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) Otorhinolaryngology.

(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 AMEs shall include the following:

(1) Pilot working environment.

(2) Aerospace physiology.

(3) Ophthalmology.

(4) Otorhinolaryngology.

(5) Cardiology and general medicine.

(6) Neurology/Psychiatry.

(7) Human factors in aviation.

(8) Tropical medicine.

(9) Hygiene.

(10) Space medicine.

IS 2.11.1.7 Medical Certificate

(a) The following details shall appear on the medical certificate:

(1) Name of State.

(2) Medical certificate number

(3) Name of holder in full;

(4) Date of birth of holder.

(5) Address of holder.

(6) Nationality of holder.

(7) Signature of holder.

(8) Medical certificate Class 1, 2, or 3.

(9) Date of Issue.

(10) Validity.

(11) Limitations.

(12) Issuing Authority.

(13) Signature of Issuing Authority.

(14) Examiner/CAA staff signature.

(15) Examiner/CAA staff name (printed).

(16) Examiner's authorization number.

(17) Date of Examination and State of Examination.