

Statutory Instrument No. 61 of 2022

CIVIL AVIATION ACT
(Cap. 71:01)

CIVIL AVIATION (PERSONNEL LICENSING) (GENERAL) REGULATIONS, 2022
(Published on 6th June, 2022)

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IN EXERCISE of the powers conferred on the Minister of Transport and Public Works by section 89 of the Civil Aviation Act, and on the recommendation of the Civil Aviation Authority, the following Regulations are hereby made —

PART I — *Preliminary*

- 1. These Regulations may be cited as the Civil Aviation (Personnel Licensing) (General) Regulations, 2022. Citation
- 2. In these Regulations, unless the context otherwise requires — Interpretation
 - “accredited medical conclusion” means a conclusion reached by one or more medical experts acceptable to the Authority and in consultation with flight operations or other experts as necessary;

- “adapted competency model” means a group of competencies with their associated description and performance criteria adapted from an International Civil Aviation Organization (ICAO) competency framework that an organization uses to develop competency-based training and assessment for a given role;
- “aeronautical experience” means the pilot time obtained in an aircraft or approved flight simulation training device that meets the training and flight time requirements of these Regulations;
- “aeroplane” means a power-driven heavier-than-air aircraft, that derives its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight;
- “aircraft” means a 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;
- “aircraft avionics” is a term designating any electronic device, including its electrical part, for use in an aircraft, including radio, automatic flight control and instrument systems;
- “aircraft category” means the classification of an aircraft according to specified basic characteristics such as aeroplane, helicopter, glider or free balloon;
- “aircraft certificated for single-pilot operation” means a type of aircraft which the State of Registry has determined, during the certification process, may be operated safely with a minimum crew of one pilot;
- “aircraft required to be operated with a co-pilot” means 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;
- “aircraft type” means all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics;
- “airframe” means the fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces including rotors, but excluding propellers and rotating airfoils of a power plant, and landing gear of an aircraft and their accessories and controls;
- “airmanship” means the consistent use of good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives;
- “airship” means a power-driven lighter-than-air aircraft;
- “appliance” means an instrument, mechanism, equipment, part, apparatus, appurtenance or accessory, including communications equipment that is used or intended to be used in operating or controlling an aircraft in flight, and that is installed in or attached to the aircraft and is not part of an airframe, power plant or propeller;
- “approved maintenance organisation” means an organisation approved by the Authority to perform specific aircraft maintenance activities including the inspection, overhaul, maintenance, repair or modification and release to service of an aircraft or aircraft component;
- “approved training” means training conducted under special curricula and supervision approved by the Authority;
- “Approved Training Organisation” means an organisation as defined in the Civil Aviation (Approved Training Organisations) Regulations;

- “ATS surveillance service” is a term used to indicate a service provided directly by means of an ATS surveillance system;
- “ATS surveillance system” is a generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of an aircraft;
- “authorised instructor” means a person who —
- (a) holds a valid and current ground or flight instructor rating issued under these Regulations, for conducting ground training or flight training; or
 - (b) is authorised by the Authority to provide ground training, flight training, or other training under these Regulations and the Civil Aviation (Approved Training Organisations) Regulations;
- “balloon” means a non-power-driven lighter-than-air aircraft;
- “category I operation” means a precision instrument approach and landing with a decision height not lower than 60 m (200 ft) and with either a visibility of not less than 800 m or Runway Visual Range (RVR) of not less than 550 m;
- “category II operation” means a precision instrument approach and landing with a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft) and an RVR of not less than 300 m;
- “category III operation” means a decision height lower than 30 m (100 ft) or no decision height and a runway visual range less than 300 m or no runway visual range limitations;
- “certify as airworthy” means to certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof;
- “commercial air transport operation” means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire;
- “competency” means a dimension of human performance that is used to reliably predict successful performance on the job, whereby a competency is manifested and observed through behaviours that mobilize the relevant knowledge, skills and attitudes to carry out activities or tasks under specified conditions;
- “competency-based training and assessment” means 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;
- “competency standard” means a level of performance that is defined as acceptable when assessing whether or not competency has been achieved;
- “Contracting State” means a State that is a signatory to the Convention on International Civil Aviation (Chicago Convention);
- “co-pilot” means 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;
- “course” means a programme of instruction to obtain a licence, rating, qualification, authorisation or current experience required under these Regulations;
- “credit” means a recognition of alternative means or prior qualifications;

- “critical engine” means the engine whose failure would most adversely affect the performance or handling qualities of an aircraft;
- “cross country” means a flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures;
- “detect and avoid” means the capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action;
- “dual instruction time” means a flight time during which a person receives flight instruction from a properly authorised pilot on board the aircraft, or from a properly authorised remote pilot using the remote pilot station during a remotely piloted aircraft flight;
- “engine” means a unit used or intended to be used for aircraft propulsion which consists of at least components and equipment necessary for functioning and control, but excludes the propeller or rotors, where applicable;
- “error” means an action or inaction by an operational person that leads to deviations from the organisational or the operational person’s intentions or expectations;
- “error management” means the process of detecting and responding to errors with counter measures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired events;
- “examiner” means a person authorised by the Authority to conduct a pilot proficiency test, a practical test for a licence or rating, or a knowledge test under these Regulations;
- “flight crew member” means a crew member charged with duties essential to the operation of an aircraft during a flight;
- “flight plan” means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;
- “flight procedures trainer” means as defined under the flight simulation training device;
- “flight simulation training device” means any of the following three types of apparatus in which flight conditions are simulated on the ground, a —
- (a) simulation flight trainer, 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) 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; or

- (c) basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight or the RPAS environment in instrument flight conditions;

“flight time” means –

- (a) for an aeroplane, the total time from the moment an aeroplane moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight; and it is synonymous with the term “block to block” 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;
- (b) for a helicopter, the total time from the moment a helicopter rotor blades start turning until the moment a helicopter comes to rest at the end of the flight and the rotor blades are stopped;
- (c) for an airship or free balloon, the total time from the moment an airship or free balloon first becomes detached from the surface until the moment when it next becomes attached thereto or comes to rest thereon; or
- (d) for remotely piloted aircraft system, 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;

“glider” means a non-power-driven heavier-than-air aircraft, that derives its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight;

“glider flight time” means the total time occupied in flight, whether it is 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;

“handover” means the act of passing piloting control from one remote pilot station to another;

“heavier-than-air aircraft” means an aircraft that derives its lift in flight chiefly from aerodynamic forces;

“helicopter” means 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;

“human performance” means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations;

“IFR” means the symbol used to designate the instrument flight rules;

“instrument approach procedure” means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, and if a landing is not completed, to a position at which holding or enroute obstacle clearance criterion applies;

- “instrument flight time” means the 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;
- “instrument ground time” means the time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the Authority;
- “instrument time” means instrument flight time or instrument ground time;
- “instrument training” means training which is received from an authorised instructor under actual or simulated instrument meteorological conditions;
- “knowledge test” means a test on the aeronautical knowledge areas required for a licence or rating that may be administered in written form or through a computer;
- “language proficiency skills” means the knowledge and abilities which impact on the capacity of a person to communicate spontaneously, accurately, intelligibly, meaningfully and appropriately in a given language;
- “likely” in the context of the medical provisions in these Regulations, means with a probability of occurring that is unacceptable to the medical assessor;
- “maintenance” means 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;
- “medical assessment” means the evidence issued by the Authority that the licence holder meets specific requirements of medical fitness;
- “medical assessor” means a physician, appointed by the Authority, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance;
- “medical conclusion” means a medical conclusion reached by one or more medical experts accredited by the Authority;
- “medical examiner” means a medical physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed;
- “monitoring” means a cognitive process to compare an actual to an expected state;
- “night” means the time between 15 minutes after sunset and 15 minutes before sunrise, sunrise and sunset being determined at surface level, and includes any time between sunset and sunrise when an unlighted aircraft or other unlighted prominent object cannot be clearly seen at a distance of 4572 m;
- “observable behaviour (OB)” means a single role-related behaviour that can be observed and may or may not be measurable;
- “performance criteria” means statements used to assess whether the required levels of performance have been achieved for a competency, and each performance criterion consists of an observable behaviour, a condition and a competency standard;

- “pilot flying (PF)” means 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;
- “pilot-in-command” means 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;
- “pilot-in-command under supervision” means a 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 Authority;
- “pilot monitoring (PM)” means the pilot whose —
- (a) primary task is to monitor the flight path and its management by the PF; and
 - (b) secondary task is to perform non-flight path related actions including radio communications, aircraft systems, other operational activities and to monitor other crew members;
- “piloting (to pilot)” means to manipulate the flight controls of an aircraft during flight time;
- “pilot time” means the time a person —
- (a) serves as a required pilot;
 - (b) receives training from an authorised instructor in an aircraft or approved flight simulation training device; or
 - (c) gives training as an authorised instructor in an aircraft or approved flight simulation training device;
- “powered-lift” means a heavier-than-air aircraft capable of vertical takeoff, vertical landing and low speed flight that depends principally on engine driven lift devices or engine thrust for lift during these flight regimes and on non-rotating aerofoil for lift during horizontal flight;
- “powerplant” means an engine that is used or intended to be used for propelling aircraft, and it includes turbo superchargers, appurtenances and accessories necessary for its functioning, but does not include propellers;
- “practical test” means a competency test on the areas of operations for a licence, certificate, rating or authorisation that is conducted by having the applicant respond to questions and demonstrate manoeuvres in flight, in an approved synthetic flight trainer or in a combination of these;
- “pressurised aircraft” means an aircraft fitted with means of controlling out flow of cabin air in order to maintain maximum cabin altitude of not more than 10 000 ft to enhance breathing and comfort of passengers and crew;
- “problematic use of substances” means 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; or
 - (b) causes or worsens an occupational, social, mental or physical problem or disorder;

- “propeller” means a device for propelling an aircraft that has blades on a power plant driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation, and it includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of engines;
- “psychoactive substance” means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psycho-stimulants, hallucinogens and volatile solvents, excluding coffee and tobacco;
- “psychosis” means a mental disorder in which a person has manifested delusions, hallucinations, grossly bizarre or disorganised behaviour or other commonly accepted symptoms of this condition or where the individual may reasonably be expected to manifest delusions, hallucinations, grossly bizarre or disorganised behaviour or other commonly accepted symptoms of this condition;
- “quality system” means documented organisational procedures and policies, internal audit of those policies and procedures; management review and recommendation for quality improvement;
- “rated air traffic controller” means an air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised;
- “rating” means an authorisation entered on or associated with a licence and forming part of the licence, stating special conditions, privileges or limitations pertaining to such licence or certificate;
- “rendering a licence valid” means the action taken by the Authority, as an alternative to issuing its own licence, in accepting a licence issued by any other Contracting State as the equivalent of its own licence;
- “repair” means the restoration of an aircraft, engine, propeller or associated part to an airworthy condition in accordance with the appropriate airworthiness requirements after it has been damaged or subjected to wear;
- “rotorcraft” means a power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors;
- “safety management system” means a systematic approach to managing safety, including the necessary organisational structures, accountability, responsibilities, policies and procedures;
- “significant” in the context of the medical provisions in these Regulations, means to a degree or of a nature that is likely to jeopardise flight safety;
- “signing a maintenance release” means to certify that maintenance work has been completed satisfactorily in accordance with appropriate airworthiness requirements, by issuing the maintenance release referred to in the Civil Aviation Regulations;
- “solo flight time” means a flight time on which a student pilot is the sole occupant of the aircraft;
- “state safety programme” means an integrated set of regulations and activities aimed at improving safety;
- “substance” means alcohol, sedatives, hypnotics, anxiolytics, hallucinogens, opioids, cannabis, inhalants, central nervous system stimulants such as cocaine, amphetamines and similarly acting sympathomimetic, phencyclidine or similarly acting arylcyclohexylamines and other psychoactive drugs and chemicals;

“substance abuse” means any of the following —

- (a) the use of a substance in a situation in which that use is or was physically hazardous;
- (b) a verified positive drug test result acquired under an anti-drug programme or internal programme of the Government; or
- (c) misuse of a substance that the Authority, based on case history and qualified medical judgement relating to the substance involved, finds that it makes the applicant unable to safely perform the duties or exercise the privileges of the licence applied for or held, or may reasonably be expected for the maximum duration of the medical certificate applied for or held, to make the applicant unable to perform those duties or exercise those privileges;

“substance dependence” means a condition in which a person is dependent on a substance, other than tobacco or ordinary xanthine-containing beverages, as evidenced by increased tolerance, manifestation of withdrawal symptoms, impaired control of use, or continued use despite damage to physical health or impairment of social, personal or occupational functioning;

“threat” means an event or error that occurs beyond the influence of an operational person which increases operational complexity and shall be managed to maintain a margin of safety;

“threat management” means a process to detect and respond to a threat with counter-measures that reduce or eliminate any consequence of the threat and mitigate the probability of an error or an undesired state;

“training programme” means a programme that consists of courses, courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective and includes a core curriculum and a speciality curriculum;

“VFR” means visual flight rules; and

“VMC” means visual meteorological conditions.

PART II — *General rules concerning licences*

3. These Regulations shall apply to the following —

Application

- (a) flight crew members —
 - (i) a private pilot,
 - (ii) a commercial pilot,
 - (iii) a multi-crew pilot,
 - (iv) an airline transport pilot,
 - (v) a glider pilot, and
 - (vi) a free balloon pilot; and
- (b) personnel —
 - (i) an aircraft maintenance engineer,
 - (ii) an air traffic controller,
 - (iii) a flight operations officer,
 - (iv) an aeronautical station operator,
 - (v) an aviation repair specialist,
 - (vi) a parachute rigger,
 - (vii) a flight radiotelephone operator,

	(viii) a cabin crew member, and (ix) any other personnel as may be determined by the Authority.
Authority to act as flight crew member	<p>4. (1) A person shall not act as a flight crew member of an aircraft unless, he or she holds a licence —</p> <p>(a) appropriate to the duties to be performed by the person; and (b) issued by the Authority in accordance with these Regulations.</p> <p>(2) Where a person holds a licence issued by a foreign Contracting State, the Authority may validate such licence.</p> <p>(3) A flight crew member shall carry the appropriate licence on board the aircraft when engaged in international air navigation.</p>
Validation of licence	<p>5. (1) The Authority may as an alternative to the issuance of its own licence, validate a licence issued by another Contracting State, by authorising a person holding such licence to exercise the privileges of the licence:</p> <p>Provided that —</p> <p>(a) such validation shall be done in a manner determined by the Authority; (b) the validation period shall not extend beyond the period of validity of the licence; and (c) such validation shall cease to be valid if the licence is suspended or revoked.</p> <p>(2) The Authority shall verify the authenticity of the licence with the Contracting State that issued the licence where validation is issued for use in a commercial air transport operation.</p> <p>(3) Notwithstanding the provisions of subregulations (1) and (2), the Authority shall automatically render valid a licence from another ICAO Contracting State that adopted common licensing regulations and the state shall have entered into a formal agreement recognising the automatic validation process with an established surveillance system to ensure the continuing implementation of the common licensing regulations.</p> <p>(4) The Contracting State shall have registered the agreement with ICAO pursuant to Article 83 of the Convention on International Civil Aviation.</p> <p>(5) An endorsement shall appear on licences rendered valid under the process of subregulations (3) and (4) indicating —</p> <p>(a) that the licence is automatically validated under the agreement; (b) the reference to the ICAO registration number of the agreement and the endorsement; and (c) a list of all states that are party to the agreement with any transition requirements where applicable.</p>
Privileges of holder of licence	<p>6. A licence holder shall not exercise privileges other than those granted under the licence.</p>
Medical fitness	<p>7. (1) An applicant for a licence shall, where applicable, hold a medical certificate issued by the Authority, in accordance with these Regulations.</p> <p>(2) To satisfy the licensing requirements of medical fitness, the applicant shall meet the appropriate medical requirements specified for the licence applied for.</p>
Competency and recency requirements	<p>8. (1) The Authority shall, after issuing a licence, ensure that the privileges granted under the licence or ratings are not exercised unless the holder maintains competency and meets the requirements for recent experience.</p> <p>(2) A licence holder shall not exercise the privileges granted by that licence unless he or she maintains competency and meets the requirements for recent experience.</p>

(3) A flight crew member, engaged in commercial air transport operations shall establish maintenance of competency by demonstration of skill during proficiency flight checks.

(4) A flight crew member may, to the extent possible, demonstrate his or her continuing competency in a flight simulation training device.

(5) A flight crew member shall record the maintenance of competency in the operator's records or in the flight crew member's personal log book or licence.

9. (1) An aeroplane, airship, helicopter, powered-lift pilot and a free balloon operator shall demonstrate the ability to speak and understand the language used for radio telephony communications to the level specified in Schedule 2 of these Regulations.

Language
proficiency

(2) An air traffic controller, a flight operations officer, cabin crew member, aircraft maintenance engineer, parachute rigger, aviation repair specialist and an aeronautical station operator shall demonstrate the ability to speak and understand the language used in radiotelephony communications to the level specified in Schedule 2 of these Regulations.

PART III — *General requirements for pilot licences, remote pilot licence and ratings*

10. An applicant for a pilot licence shall —

(a) before being issued with a pilot licence or rating, meet such requirements in respect of age, knowledge, experience, flight instruction, skill and medical fitness specified for the licence or rating applied for; and

(b) demonstrate in a manner determined by the Authority, such requirements for knowledge and skill specified for the licence or rating applied for.

General
licensing
specifications

11. (1) A person shall not, unless he or she is a holder of a pilot licence issued in accordance with these Regulations, act as a pilot-incommand or co-pilot of an aircraft in any of the following categories —

Category
ratings

(a) an aeroplane;

(b) an airship of a volume of more than 4600 cubic metres;

(c) a free balloon;

(d) a glider;

(e) a helicopter; or

(f) a powered-lift.

(2) The Authority shall include the category of the aircraft in the title of the licence or endorse it as a rating on the licence:

Provided that the category rating shall not be endorsed on a licence if the category is included in the title of the licence.

(3) Where the holder of a pilot licence applies for a licence for an additional aircraft category, the Authority shall —

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

(b) endorse the original licence with the new category rating.

(4) The holder of a pilot licence who applies for an additional category rating shall meet the requirements of these Regulations, appropriate to the privileges for the category rating applied for.

Class and type ratings

(5) Where the Authority issues an additional category rating or endorses the additional category rating on a pilot licence, the additional category rating shall indicate the level of licensing privileges at which the category rating is granted.

12. (1) The Authority shall establish class ratings for aeroplanes certificated for single-pilot operation including class ratings for a —

- (a) single-engine land aeroplane;
- (b) multi-engine land aeroplane; and
- (c) helicopter or powered-lift which has comparable handling, performance and other characteristics.

(2) The Authority shall establish type ratings for —

- (a) an aircraft certificated for operation with a minimum crew of at least two pilots;
- (b) a helicopter or powered-lift certificated for single-pilot operation except where a class rating has been established under subregulation (1); or
- (c) any aircraft, whenever the Authority considers it necessary.

(3) Where the Authority establishes a common type rating, the rating shall only apply to an aircraft with similar characteristics in operating procedures, systems and handling.

(4) Where an applicant demonstrates the skill and knowledge required for the initial issue of a pilot licence, the Authority shall enter the category and rating appropriate to the class and type of aircraft used in the demonstration, on the licence.

(5) Where the Authority issues a type rating limiting the privileges to act as co-pilot or limiting the privileges to act as pilot only during the cruise phase of the flight, the Authority shall endorse such limitation on the rating.

(6) The Authority may, for the purpose of training, testing, or for specific special purpose non-revenue or non-passenger carrying flights —

- (a) provide in writing to the licence holder, special authorisation, in place of issuing a type rating in accordance with subregulation (2); and
- (b) the authorisation shall be limited in validity, to the time needed to complete the specific flight.

(7) The Authority, having issued a licence, shall ensure that other Contracting States are satisfied as to the validity of the licence.

Requirements for class and type ratings

13. (1) An applicant for a class rating shall demonstrate a degree of skill appropriate to the licence in an aircraft of the class for which the rating is applied for.

(2) An applicant for a type rating shall —

- (a) have experience in the appropriate type of aircraft or flight simulator, which experience shall be gained under appropriate supervision, in —
 - (i) the normal flight procedures and manoeuvres during all phases of flight,
 - (ii) the abnormal and emergency procedures and manoeuvres in cases of failure and malfunction of equipment, such as powerplant, systems and airframe,
 - (iii) where applicable, the instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions and simulated engine failure, and
 - (iv) the procedures for crew incapacitation and coordination, including allocation of pilot tasks, crew cooperation and use of checklists;

- (b) demonstrate the skill and knowledge required for the safe operation of the applicable type of aircraft, and relevant to the duties of a pilot-in-command or co-pilot; and
- (c) demonstrate, at the airline transport pilot licence level, an extent of knowledge required under these Regulations.
- (3) Where the application is for a type rating for —
 - (a) an aircraft certificated for operation with a minimum crew of at least two pilots; or
 - (b) a helicopter or powered-lift certificated for single-pilot operation.
- (4) The applicant shall demonstrate the skill and knowledge required for the safe operation of the applicable type of aircraft and relevant to the licensing requirements and piloting functions of the applicant.

14. Where an applicant uses a flight simulation training device to acquire the experience or perform any manoeuvre required during a demonstration of skill for the issue of a licence, the Authority shall ensure that the training device used is appropriate to the task and shall approve the use of such training device.

Use of flight simulation training device

15. A holder of a pilot licence shall not act as a pilot-in-command or co-pilot of an aircraft under instrument flight rules unless he or she has received an instrument rating, from the Authority, appropriate to the aircraft category.

Instrument rating

16. (1) A person shall not carry out a flight instruction required for the issue of a pilot licence or rating, unless he or she —

Authorisation to conduct instruction

- (a) holds an appropriate pilot licence;
- (b) has received a flight instruction rating on his or her pilot licence, from the Authority;
- (c) has been authorised by the Authority to act as an agent of an approved training organisation, carrying out flight instruction; or
- (d) has received a specific authorisation from the Authority.

(2) A person shall not carry out an instruction, on a flight simulation training device, required for the issue of a licence or rating, unless he or she —

- (a) holds an appropriate licence; or
- (b) has the appropriate flight training experience; and
- (c) has received a specific authorisation from the Authority.

(3) An approved training for flight crew and air traffic controllers shall be conducted within an approved training organisation.

(4) Any competency-based approved training for aircraft maintenance personnel shall be conducted within an approved training organisation.

17. (1) A student pilot or a holder of a pilot licence 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 licence or the issue of a higher grade of pilot licence.

Crediting of flight time

(2) When acting as a co-pilot of an aircraft certificated for operation by a single pilot, but the Authority requires for the aircraft to be operated with a co-pilot, the holder of a pilot licence shall be entitled to be credited with not more than 50 per cent of the co-pilot flight time towards the total flight time required for a higher grade of pilot licence.

(3) Notwithstanding subregulation (2), the Authority may authorise that flight time shall 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.

(4) When acting as a co-pilot of an aircraft certificated to be operated with a co-pilot, the holder of a pilot licence shall be entitled to be credited in full with the flight time towards the total time required for a higher grade of pilot licence.

(5) When acting as a pilot-in-command under supervision, the holder of a pilot licence shall be entitled to be credited in full with the flight time towards the total flight time required for a higher grade of pilot licence.

Limitation of privileges of pilots aged over 60 years

18. A holder of a pilot licence shall not act as pilot-in-command of an aircraft engaged in international commercial air transport operations if the licence holder has attained his or her 60th birthday, or in the case of operations with more than one pilot where the other pilot is younger than 60 years of age, his or her 65th birthday.

PART IV — *Student pilot licence*

Student pilot licence

19. (1) The Authority shall set out the requirements and privileges for a student pilot and in setting out the privileges, the Authority shall ensure that such privileges do not permit a student pilot to constitute a hazard to air navigation.

(2) A student pilot shall not fly solo unless he or she —

(a) is under the supervision of, or has the authority from an authorised flight instructor; and

(b) holds a current Class 2 medical certificate.

(3) A student pilot shall not fly solo in an aircraft on an international flight unless it is by special or general arrangement between Botswana and the Contracting State concerned.

PART V — *Private pilot licence*

A — General requirements appropriate to the aeroplane, airship, helicopter and powered-lift categories

Age requirements

20. An applicant for a private pilot licence, appropriate to the aeroplane, airship, helicopter and powered-lift categories, shall be at least 17 years of age.

Knowledge requirements

21. An applicant for a private pilot licence shall demonstrate a level of knowledge, appropriate to the privileges granted to the holder of a private pilot licence and appropriate to the category of aircraft intended to be included in the licence, in the following subjects —

(a) air law —

(i) rules and regulations relevant to the holder of a private pilot licence,

(ii) rules of the air,

(iii) altimeter setting procedures, and

(iv) appropriate air traffic service practices and procedures;

(b) aircraft general knowledge —

(i) principles of operation and functioning of engines, systems and instruments,

(ii) operating limitations of the relevant category of aircraft and engines including the relevant operational information from the flight manual or other appropriate document,

(iii) in the case of helicopters and powered-lifts, transmission (power trains), where applicable, and

(iv) in the case of airships, physical properties and practical application of gases;

- (c) flight performance, planning and loading, including —
 - (i) the effects of loading and mass distribution on flight characteristics,
 - (ii) the 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 visual flight rules,
 - (iv) the preparation and filing of air traffic service flight plans,
 - (v) the appropriate air traffic service procedures,
 - (vi) position reporting procedures,
 - (vii) altimeter setting procedures, and
 - (viii) operations in areas of high-density traffic;
- (d) human performance, including principles of threat and error management;
- (e) meteorology, including —
 - (i) the application of elementary aeronautical meteorology,
 - (ii) the use of and procedures for obtaining meteorological information,
 - (iii) altimetry, and
 - (iv) hazardous weather conditions;
- (f) the practical aspects of air navigation, dead-reckoning techniques and the use of aeronautical charts;
- (g) operational procedures, including —
 - (i) the application of threat and error management to operational performance,
 - (ii) altimeter setting procedures,
 - (iii) the use of aeronautical documentation such as Notice to Air Missions (NOTAM), aeronautical codes and abbreviations,
 - (iv) appropriate precautionary and emergency procedures, including action taken to avoid hazardous weather, wake turbulence and operating hazards, and
 - (v) in the case of helicopters and if applicable, powered-lifts, settling with power, ground resonance, retreating blade stall, dynamic roll over and safety procedures associated with flight in VMC;
- (h) the principles of flight; and
- (i) radiotelephony, including the —
 - (i) communication procedures and phraseology as applied to visual flight rules operations, and
 - (ii) action to be taken in case of communication failure.

22. An applicant for a private pilot licence shall, as a pilot-in-command of an aircraft within appropriate category, demonstrate the ability to perform the procedures and manoeuvres, as may be specified by the Authority, with a degree of competency appropriate to the privileges granted to the holder of a private pilot licence and to —

Skills
requirements

- (a) recognise and manage threats and errors;
- (b) operate the aircraft within its limitations;
- (c) complete all maneuvers with smoothness and accuracy;
- (d) exercise good judgement and airmanship;
- (e) apply aeronautical knowledge; and
- (f) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

23. An applicant for a private pilot licence shall hold a current class 2 medical certificate.

Medical fitness

Privileges of private pilot licence

24. (1) Subject to the requirements under these Regulations, a holder of a private pilot licence shall act, but not for remuneration, as a pilot-in-command or co-pilot of an aircraft, within the appropriate aircraft category, engaged in non-revenue flights.

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

B — Specific requirements for aeroplane category

Experience

25. (1) The applicant shall have completed not less than 40 hours of flight time during a course of approved training, as a pilot of aeroplanes appropriate to the class rating sought.

(2) Where the Authority determines that experience as a pilot, under instruction, in a flight simulation training device is acceptable as part of the total flight time of the 40 hours, credit for such experience shall be limited to a maximum of five hours.

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

(4) The applicant shall have completed in aeroplanes, not less than —

- (a) 10 hours of solo flight, appropriate to the class rating sought, under the supervision of an authorised flight instructor; and
- (b) five hours of solo cross-country flight time with at least one solo cross-country flight of a total of not less than 270 kilometres or 150 nautical miles, in the course of which full-stop landings at two different aerodromes shall be made.

Flight instruction

26. (1) An applicant for a private pilot licence, with an aeroplane category rating, shall have received dual instruction in an aeroplane appropriate to the class rating applied for, from an authorised flight instructor.

(2) The instructor shall ensure that the applicant has operational experience, to the level of performance required for a private pilot, in —

- (a) recognising and managing threats and errors;
- (b) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
- (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (d) control of the aeroplane by external visual reference;
- (e) flight at critically slow airspeeds, recognition of and recovery from incipient and full stalls;
- (f) flight at critically high airspeeds, recognition of and recovery from spiral dives;
- (g) normal and crosswind take-off and landing;
- (h) maximum performance, being short field and obstacle clearance;
- (i) take-off and short-field landings;
- (j) flight by reference solely to instruments, including the completion of a level 180 degree turn;
- (k) cross-country flying using visual reference, dead reckoning and where available, radio navigation aids;

- (l) emergency operations, including simulated aeroplane equipment malfunctions;
- (m) operations to, from and transiting controlled aerodromes; compliance with air traffic service procedures; and
- (n) communication procedures and phraseology.

C – Specific requirements for helicopter category

27. (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. Experience

(2) The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 40 hours or 35 hours, as the case may be, and credit for such experience shall be limited to a maximum of five hours.

(3) The Authority shall, where the applicant has flight time as a pilot of aircraft in other categories, determine —

- (a) whether such experience is acceptable; and if so,
- (b) the extent to which the flight time requirements of subregulation (1) may be reduced.

(4) The applicant shall have completed in helicopters, not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including five hours of solo cross-country flight time with at least one cross-country flight, at a total of not less than 180 km (100 nautical miles) in the course of which landings, at two different points shall be made.

28. (1) An applicant for private pilot licence with a helicopter rating shall have received not less than 20 hours of dual instruction time, in a helicopter, from an authorised flight instructor. Flight instruction

(2) The instructor shall ensure that the applicant has operational experience, to the level of performance required for a private pilot, in —

- (a) recognising and managing threats;
- (b) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;
- (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (d) controlling the helicopter by external visual reference;
- (e) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
- (f) ground manoeuvring and run-ups, hovering, take-offs and landings on normal, out of wind and sloping ground;
- (g) take-offs and landings with necessary power, including maximum performance take-off and landing techniques on restricted site operations or quick stops;
- (h) cross-country flying using visual reference, dead reckoning and where available, radio navigation aids including a flight of at least one hour;
- (i) emergency operations, including simulated helicopter equipment malfunction and autorotative approach;
- (j) operations to, from and transiting controlled aerodromes;
- (k) compliance with air traffic service providers; and
- (l) communication procedures and phraseology.

(3) The applicant shall have received dual instrument flight instruction from an authorised flight instructor.

(4) The flight instructor shall ensure that the applicant has operational experience in flight, by reference solely to instruments, including the completion of a level 180 degree turn in a suitably instrumented helicopter.

D — *Specific requirements for powered-lift category*

Experience

29. (1) An applicant for a private pilot licence with a powered-lift category rating shall have completed not less than 40 hours of flight time as a pilot of powered-lifts.

(2) The Authority shall determine whether experience as a pilot under instruction, in a flight simulation training device, is acceptable as part of the total flight time of 40 hours required under subregulation (1).

(3) Where the applicant has flight time as a pilot of an aircraft in other categories, the Authority shall determine whether such experience is acceptable as part of the total flight time and the extent to which the flight time requirements under subregulation (1) may be reduced.

(4) An applicant shall have completed, in a powered-lift, not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including five hours of solo cross-country flight time with at least one cross-country flight of a total of not less than 270 kilometres or 150 nautical miles, in the course of which full-stop landings at two different aerodromes shall be made.

Flight instruction

30. (1) An applicant for a private pilot licence with a powered-lift category rating shall have received not less than 20 hours of dual instruction time in a powered-lift, from an authorised flight instructor.

(2) A flight instructor shall ensure that the applicant has operational experience, to the level of performance required for a private pilot, in —

- (a) recognising and managing threats and errors;
- (b) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;
- (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (d) controlling a powered-lift by external visual reference;
- (e) ground manoeuvring and run-ups, hover and rolling take-offs and climb-out, hover and rolling approach and landings for normal, out of wind and sloping ground;
- (f) take-off and landing with minimum necessary power, maximum performance take-off and landing techniques in restricted site operations and quick stops;
- (g) flight by reference solely to instruments, including completion of a level 180 degree turn;
- (h) recovery at the incipient stage from settling with power, recovery techniques from low-rotor rpm within the normal range of engine rpm;
- (i) cross-country flying using visual reference, dead reckoning and where available, radio navigation aids, including a flight of at least one hour;
- (j) emergency operations, including simulated powered-lift equipment malfunctions, power of reconversion to autorotation and autorotative approach, and where applicable, transmission and interconnect driveshaft failure;

- (k) operations to, from and transiting controlled aerodromes;
- (l) compliance with air traffic service procedures; and
- (m) communication procedures and phraseology.

E — Specific requirements for airship category

31. An applicant for a private pilot licence with an airship category rating shall have completed not less than 25 hours of flight time, as a pilot of an airship, including at least — Experience

- (a) three hours of cross-country flight training in an airship, with a cross-country flight of a total of not less than 45 km or 25 nautical miles;
- (b) five take-offs and five landings to a full stop at an aerodrome, with each landing involving a flight in the traffic pattern at an aerodrome;
- (c) three hours of instrument time; and
- (d) five hours as a pilot assuming the duties of a pilot-in-command, under the supervision of the pilot-in-command.

32. (1) An applicant for a private pilot licence with an airship category rating shall have received dual instruction, in an airship, from an authorised flight instructor. Flight instruction

(2) A flight instructor shall ensure that the applicant under subregulation (1) has received instruction in —

- (a) recognising and managing threats and errors;
- (b) pre-flight operations, including mass and balance determination, airship inspection and servicing;
- (c) ground reference manoeuvres;
- (d) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (e) techniques and procedures for take-off, including appropriate limitations, emergency procedures and signals used;
- (f) controlling an airship by external visual reference;
- (g) take-offs, landings and go-arounds;
- (h) maximum performance (obstacle clearance), take-offs;
- (i) flight by reference solely to instruments, including the completion of a level 180 degree turn;
- (j) navigation, cross-country flying using visual reference, dead reckoning and radio navigation aids;
- (k) emergency operations, recognition of leaks, including simulated airship equipment malfunctions; and
- (l) communication procedures and phraseology.

PART VI — Commercial pilot licence

A — General requirements appropriate to the aeroplane airship, helicopter and powered-lift categories

33. An applicant for a commercial pilot licence shall not be less than 18 years of age. Age requirements

34. (1) An applicant for a commercial pilot licence shall have demonstrated a level of knowledge, appropriate to the privileges granted to the holder of a commercial licence and appropriate to the category of aircraft intended to be included in the licence, in — Knowledge requirements

- (a) air law —
 - (i) rules and regulations relevant to the holder of a commercial pilot licence,
 - (ii) rules of the air, and
 - (iii) appropriate air traffic service practices and procedures;
- (b) aircraft general knowledge for aeroplanes, airship, helicopters and powered-lift, including —
 - (i) principles of operation and functioning of engines, systems and instruments,
 - (ii) operating limitations of the relevant category of aircraft and engines,
 - (iii) relevant operational information from the flight manual or other documents,
 - (iv) use and serviceability checks of equipment and systems of the appropriate aircraft,
 - (v) maintenance procedures for airframes, systems and engines of the appropriate aircraft,
 - (vi) in the case of a helicopter or powered-lift, transmission (power train), where applicable, or
 - (vii) in the case of an airship, physical properties and practical application of gases;
- (c) flight performance, planning and loading, including —
 - (i) the effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations,
 - (ii) the use and practical application of take-off, landing and other performance data, or
 - (iii) in the case of an airship, helicopter or powered-lift, the effects of external loading on handling;
- (d) human performance including principles of threat and error management;
- (e) meteorology, including —
 - (i) the interpretation and application of aeronautical meteorological reports, charts and forecasts,
 - (ii) the use of, and procedures for obtaining meteorological information pre-flight and in-flight,
 - (iii) altimetry,
 - (iv) aeronautical meteorology including climatology of relevant areas in relation to elements that have effect on aviation,
 - (v) 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, and
 - (vi) the causes, recognition and effects of icing, including frontal zone penetration procedures; hazardous weather avoidance;
- (f) navigation, including —
 - (i) air navigation including the use of aeronautical charts, instruments and navigation aids,
 - (ii) an understanding of the principles and characteristics of appropriate navigation systems,
 - (iii) the operation of airborne equipment, and

- (iv) in the case of airships the —
 - (aa) use, limitation and serviceability of avionics and instruments necessary for control and navigation,
 - (bb) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight and identification of radio navigation, and
 - (cc) principles and characteristics of self-contained and external referenced navigation system and operation of airborne equipment;
- (g) operational procedure —
 - (i) the application of threat and error management to operational performance,
 - (ii) the use of aeronautical documentation such as NOTAM, aeronautical codes and abbreviations,
 - (iii) altimeter setting procedures,
 - (iv) the appropriate precautionary and emergency procedures,
 - (v) the operational procedures for carriage of freight, potential hazards associated with dangerous goods,
 - (vi) the requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from the aircraft, and
 - (vii) in the case of a helicopter and where applicable, powered-lift, settling with power, ground resonance, retreating blade stall, dynamic rollover and other operating hazards and safety procedures associated with flight in VMC;
- (h) principles of flight; and
- (i) radiotelephony communication procedures and phraseology applied to visual flight rules operations, including action to be taken in the case of communication failure.

35. An applicant for a commercial pilot licence shall demonstrate the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres, as may be specified by the Authority, with a degree of competency appropriate to the privileges granted to the holder of a commercial pilot licence, and shall —

Skills requirements

- (a) recognise and manage threats and errors;
- (b) operate the aircraft within its limitations;
- (c) complete all manoeuvres with smoothness and accuracy;
- (d) exercise good judgement and airmanship;
- (e) apply aeronautical knowledge;
- (f) maintain control of the aircraft at all times; and
- (g) ensure the successful outcome of a procedure or manoeuvre.

36. An applicant for a commercial pilot licence shall hold a Class 1 Medical Certificate.

Medical fitness

37. (1) Subject to compliance with the requirements specified in these Regulations, the privileges of the holder of a commercial pilot licence shall be —

Privileges and conditions of commercial pilot licence

- (a) to exercise all the privileges of the holder of a private pilot licence in an aircraft, within the appropriate aircraft category;
- (b) to act as a pilot-in-command of an aircraft within the appropriate aircraft category engaged in operations other than commercial air transportation;

- (c) to act as a pilot-in-command of an aircraft, within the appropriate aircraft category and certificated for single-pilot operation, engaged in commercial air transportation;
 - (d) to act as a co-pilot of an aircraft, within the appropriate aircraft category, required to be operated with a co-pilot; and
 - (e) in the case of an airship category, to pilot an airship under instrument flight rules.
- (2) Where the privileges are exercised at night, the holder of the licence shall have received dual instruction in an aircraft, within the appropriate category of an aircraft in night flying, including take-off, landing and navigation.

B — Specific requirements for aeroplane category

Experience

38. (1) An applicant for a commercial pilot licence with an aeroplane category rating 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.

(2) The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 200 hours or 150 hours, as the case may be and credit for such experience shall be limited to a maximum of 20 hours.

(3) The applicant shall have completed in an aeroplane, not less than —

- (a) 100 hours as a pilot-in-command or, in the case of a course of approved training, 70 hours as a pilot-in-command;
- (b) 20 hours of cross-country flight time as a pilot-in-command including a cross-country flight of a total of not less than 540 kilometres or 300 nautical miles, in the course of which full-stop landings at two different aerodromes shall be made;
- (c) 10 hours of instrument instruction time, of which not more than five hours may be instrument ground time; and
- (d) five hours of night flight time including five take-offs and five landings as a pilot-in-command, if the privileges of the licence are to be exercised at night.

(4) Where an applicant has flight time as a pilot of aircraft in other categories, the Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of subregulation (2) can be reduced accordingly.

Flight instruction

39. (1) An applicant for a commercial pilot licence with an aeroplane category rating shall have received dual instruction in an aeroplane, appropriate to the class and type rating sought, from an authorised flight instructor.

(2) A flight instructor shall ensure that the applicant has operational experience, to the level of performance required for a commercial pilot, in at least the following —

- (a) recognising and managing errors and threats;
- (b) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
- (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (d) control of the aeroplane by external visual reference;
- (e) flight at critically slow airspeeds; spin avoidance; recognition of and recovery from, incipient and full stalls;

- (f) flight with asymmetrical power for multi-engine class and type rating;
- (g) flight at critically high airspeed; recognition of, and recovery from spiral dives;
- (h) maximum performance, short field and obstacle clearance take-offs and landings;
- (i) normal and cross-wind take-offs and landings;
- (j) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
- (k) cross-country flying using visual reference, dead reckoning and radio navigation aids; diversion procedures;
- (l) abnormal and emergency procedures including simulated aeroplane equipment malfunctions;
- (m) operations to, from and transiting controlled aerodromes, compliance with air traffic service procedures; and
- (n) communication procedures and phraseology.

C — Specific requirements for powered-lift category

40. (1) An applicant for a commercial pilot licence with a powered-lift category rating shall have completed, as a pilot of a powered-lift, 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. Experience

(2) The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 200 hours or 150 hours, as the case may be.

(3) The applicant shall have completed, in a powered-lift, not less than —

- (a) 50 hours as a pilot-in-command;
- (b) 10 hours of cross-country flying as a pilot-in-command, including cross-country flight at a total of not less than 540 kilometres or 300 nautical miles, in the course of which full-stop landings at two different aerodromes shall be made;
- (c) 10 hours of instrument instruction, of which not more than five hours may be instrument ground time; and
- (d) five hours of night flight time including five take-offs and landings as a pilot-in-command if the privileges are to be exercised at night.

(4) Where the applicant has flight time as a pilot of aircraft in other categories, the Authority shall determine whether such experience is acceptable and the extent to which flight time requirements under subregulation (1) may be reduced.

41. (1) An applicant for a commercial pilot licence with a powered-lift category shall have received dual instruction in a powered-lift from an authorised flight instructor. Flight instruction

(2) A flight instructor shall ensure that the applicant has operational experience, to the level of performance required for the commercial pilot, in —

- (a) recognising and managing errors and threats;
- (b) pre-flight operations including mass and balance determination, powered-lift inspection and servicing;
- (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (d) controlling a powered-lift by external visual reference;
- (e) recovery at incipient stage from settling with power, recovery techniques from low-rotor rpm within the normal range engine rpm;

- (f) ground manoeuvring and run-ups, hovering and rolling take-offs and climb-out; hover and rolling approach and landings-normal, out of wind and sloping ground steep approaches;
- (g) take-off and landing with minimum necessary power, maximum performance take-off and landing techniques, restricted site operations and quick stops;
- (h) hovering out of ground effect, operations with external load, if applicable, on flight at high altitude;
- (i) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
- (j) cross-country flying using visual reference, dead reckoning and where available, radio navigation aids, including a flight of at least one hour;
- (k) emergency operations including simulated powered-lift equipment malfunctions, power of reconversion to autorotation and autorotative approach, and where applicable, transmission and interconnect driveshaft failure;
- (l) operations to and from controlled aerodromes including compliance with air traffic service procedures; and
- (m) communication procedures and phraseology.

D — Specific requirements for airship category

Experience

- 42.** (1) An applicant for commercial pilot licence with an airship category rating shall have completed not less than 200 hours of flight time as a pilot.
- (2) The applicant shall have completed not less than —
- (a) 50 hours as a pilot of an airship;
 - (b) 30 hours in an airship as a pilot-in-command or pilot-in-command under supervision, which shall include not less than —
 - (i) 10 hours of cross-country flight time, and
 - (ii) 10 hours of night flight;
 - (c) 40 hours of instrument time, of which 20 hours shall be in flight and 10 hours in flight in an airship; and
 - (d) 20 hours of flight training in airships in the areas of operation specified by the Authority.

Flight instruction

- 43.** An applicant for a commercial pilot with an airship category rating shall have received dual instruction, in an airship, from an authorised flight instructor.
- (2) A flight instructor shall ensure that the applicant has operational experience, to the level of performance required for the commercial pilot, in —
- (a) recognising and managing errors and threats;
 - (b) pre-flight operations including mass and balance determination, airship inspection and servicing;
 - (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (d) techniques and procedures for take-off, including appropriate limitations, emergency procedures and signals used;
 - (e) control of an airship by external visual reference;
 - (f) recognising leaks;
 - (g) normal take-off and landing;
 - (h) maximum performance (short field and obstacle clearance) take-off and short field landing;

- (i) flight under instrument flight rules;
- (j) cross-country flying using visual reference, dead reckoning and where applicable, radio navigation aids;
- (k) emergency operations including simulated airship equipment malfunctions;
- (l) operations to, from and transiting controlled aerodromes and compliance with air traffic service procedures; and
- (m) communication procedures and phraseology.

E — Specific requirements for helicopter category

44. (1) An applicant for a commercial pilot licence with a helicopter category rating 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. Experience

(2) The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 150 hours or 100 hours, as the case may be and credit for such experience shall be limited to a maximum of 10 hours.

(3) The applicant shall have completed, in a helicopter, not less than —

- (a) 35 hours as a pilot-in-command;
- (b) 10 hours of cross-country flying as a pilot-in-command, including cross-country flight in the course of which full-stop landings at two different points shall be made;
- (c) 10 hours of instrument instruction time of which not more than five hours may be instrument ground time; and
- (d) five hours of night flight time including five take-offs and five landings patterns as a pilot-in-command if the privileges are to be exercised at night.

(4) Where the applicant has flight time as a pilot of aircraft in other categories, the Authority shall determine whether such experience is acceptable and, if so, the extent to which flight time requirements under subregulation (1) may be reduced.

45. (1) An applicant for a commercial pilot licence with a helicopter category shall have received dual instruction in a helicopter from an authorised flight instructor. Flight instruction

(2) The flight instructor shall ensure that the applicant has operational experience, to the level of performance required for the commercial pilot, in —

- (a) recognising and managing threats and errors;
- (b) pre-flight operations including mass and balance determination, helicopter inspection and servicing;
- (c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (d) control of the helicopter by external visual reference;
- (e) recovery at incipient stage, from settling with power;
- (f) recovery techniques from low-rotor rpm within the normal range engine rpm;
- (g) ground manoeuvring and run-ups, hovering, take-offs;
- (h) landings in normal, out of wind and sloping ground and steep approaches;
- (i) take-off and landing with minimum necessary power, maximum performance take-off and landing techniques, restricted site operations and quick stops;

- (j) hovering out of ground effect, operations with external load, if applicable, flight at high altitude;
- (k) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
- (l) cross-country flying using visual reference, dead reckoning and radio navigation aids and diversion procedures;
- (m) abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing;
- (n) operations to and from and controlled aerodromes, compliance with air traffic service procedures; and
- (o) communication procedures and phraseology.

PART VII — Multi-crew pilot licence (MPL) for aeroplane category

Age requirements	46. An applicant for multi-crew pilot licence shall not be less than 18 years of age.
Competencies	<p>47. The Authority shall adapt and publish a competency model for multi-crew pilot licensing.</p> <p>(2) An applicant for MPL 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.</p>
Knowledge requirements	<p>48. (1) An applicant for a multi-crew pilot licence shall at least meet the requirements specified for an airline transport pilot licence, appropriate to the aeroplane category in an approved training course as well as the additional requirements underpinning the approved adapted competency model.</p> <p>(2) Training in the underpinning knowledge requirements shall be fully integrated with the training of the underpinning skill requirements.</p>
Skills requirements	<p>49. (1) The applicant shall have demonstrated the underpinning skills required for the competencies of the approved adapted competency model as pilot flying and pilot monitoring, 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.</p> <p>(2) The Authority shall make the competency standards to be achieved and the associated performance criteria for the multi-crew pilot licence applicant shall be publicly available.</p>
Medical fitness	50. An applicant for a multi-crew pilot licence shall hold a Class 1 Medical Certificate.
Privileges and conditions of multi-crew pilot licence	<p>51. (1) Subject to compliance with the requirements specified in these Regulations, a holder of a multi-crew pilot licence shall —</p> <ul style="list-style-type: none"> (a) exercise all the privileges of the holder of a private pilot licence in an aeroplane category, provided that the specific requirements for the aeroplane category under regulation 48 are met; (b) exercise the privileges of an instrument rating in a multi-crew operation; and (c) act as a co-pilot of an aeroplane required to be operated with a co-pilot. <p>(2) The licence holder shall, before exercising the privileges of an instrument rating in a single-pilot operation in an aeroplane, —</p> <ul style="list-style-type: none"> (a) demonstrate an ability to act as pilot-in-command in a single-pilot operation, exercised by reference solely to instruments; and

- (b) meet the skills requirements for an instrument rating, appropriate to the aeroplane category.
- (3) The holder of a multi-crew pilot licence shall, before exercising the privileges of an instrument rating in a single-pilot operation in an aeroplane —
 - (a) complete 70 hours —
 - (i) as a pilot-in-command, or
 - (ii) made up of not less than 10 hours as a pilot-in-command and 10 hours as a pilot-in-command under supervision;
 - (b) complete 20 hours of cross-country flight time —
 - (i) as a pilot-in-command, or
 - (ii) made up of not less than 10 hours as a pilot-in-command and 10 hours as a pilot-in-command under supervision, including a cross-country flight to a total of not less than 540 km or 300 nautical miles, in the course of which full-stop landings at two different aerodromes shall be made; and
 - (c) meet the requirements, for a commercial pilot licence appropriate to the aeroplane category.

52. (1) An applicant for a multi-crew pilot licence shall have completed, in an approved training course, not less than 240 hours, which includes actual and simulated flight, as a pilot flying and pilot monitoring. Experience

- (2) Flight experience in actual flight shall include —
 - (a) the experience required for an aeroplane category rating;
 - (b) upset recovery training;
 - (c) night flying; and
 - (d) flight by reference solely to instruments.

(3) In addition to meeting the provisions of subregulation (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 Authority, in accordance with Part A of Schedule 3 the experience necessary to achieve the final competency standard of the approved adapted competency model.

53. (1) An applicant for a multi-crew pilot licence shall have completed a course of approved training covering the experience requirements under regulation 51. Flight instruction

(2) The applicant shall have received dual flight instruction in order to achieve the final competency standard in all the competencies of the approved adapted competency model for the issue of the multi-crew pilot licence.

PART VIII — *Airline transport pilot licence*

A — General requirements appropriate to the aeroplane, airship, helicopter and powered-lift categories

54. An applicant for an airline transport pilot licence shall not be less than 21 years of age. Age requirements

55. (1) An applicant for an airline transport pilot licence shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an airline transport pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects — Knowledge requirements

- (a) air law —
 - (i) rules and regulations relevant to the holder of an airline transport pilot licence,
 - (ii) rules of the air, and
 - (iii) appropriate air traffic service practices and procedures;
- (b) aircraft general knowledge for aeroplanes, helicopters and powered lifts, including —
 - (i) the general characteristics and limitations of electrical, hydraulic, pressurisation and other aircraft systems, flight control systems including autopilot and stability augmentation,
 - (ii) the principles of operation, handling procedure, operating limitations of aircraft engines,
 - (iii) effects of atmospheric conditions on engine performance,
 - (iv) relevant operational information from the flight manual or any other appropriate document,
 - (v) the operating procedures and limitations of the relevant category of aircraft,
 - (vi) effects of atmospheric conditions on aircraft performance in accordance with the relevant operational information from the flight manual,
 - (vii) the use and serviceability checks of equipment and systems of appropriate aircraft,
 - (viii) flight instruments,
 - (ix) compasses, turning and acceleration errors,
 - (x) gyroscopic instruments operational limits and precession effects,
 - (xi) practices and procedures in the event of malfunctions of various flight instruments and electronic display units,
 - (xii) the maintenance procedures for airframes, systems and engines of appropriate aircraft, and
 - (xiii) for helicopters and powered-lift, transmission (power trains), where applicable;
- (c) flight performance, planning and loading, —
 - (i) the effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations,
 - (ii) the use of 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 service procedures, altimeter setting procedures, and
 - (iv) in the case of helicopters and powered lifts, the effects of external loading on handling;
- (d) human performance including principles of threat and error management;
- (e) meteorology, —
- (f) the interpretation and application of aeronautical meteorological reports, charts and forecasts,
 - (i) codes and abbreviations,
 - (ii) the use of, and procedures for obtaining meteorological information, pre-flight and in-flight,

- (iv) altimetry,
 - (v) aeronautical meteorology,
 - (vi) climatology of relevant areas in respect of the elements having an effect upon aviation,
 - (vii) the movement of pressure systems;
 - (viii) the structure of fronts and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions,
 - (ix) the causes, recognition and effects of icing,
 - (x) frontal zone penetration procedures and hazardous weather avoidance,
 - (xi) in the case of aeroplanes and powered-lifts, practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts, and
 - (xii) jet streams;
 - (g) operational procedures —
 - (i) application of threat and error management to operational performance,
 - (ii) interpretation and use of aeronautical documentation such as Adaptive Internet Protocol (AIP), NOTAM, aeronautical codes and abbreviations,
 - (iii) precautionary and emergency procedures and safety practices,
 - (iv) operational procedures for carriage of freight and dangerous goods,
 - (v) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft,
 - (vi) in the case of helicopter and where applicable, powered-lift, settling with power, ground resonance, retreating blade stall, dynamic rollover and other operating hazards, including safety procedures associated with flight in VMC;
 - (h) navigation, —
 - (i) air navigation, including the use of aeronautical charts, instruments and radio navigation aids and area navigation systems,
 - (ii) specific navigation requirements for long-range flights,
 - (iii) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft,
 - (iv) the use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids, and
 - (v) principles and characteristics of self-contained and external referenced navigation system; operation of airborne equipment;
 - (i) principles of flight;
 - (j) radiotelephony;
 - (k) communication procedures and phraseology; and
 - (l) action to be taken in the case of communication failure.
- (2) An applicant for airline transport pilot licence appropriate to the aeroplane or powered-lift category shall, in addition to the knowledge requirements under subregulation (1), have met the knowledge requirements for an instrument rating.

Skills
requirements

56. (1) An applicant for an airline transport pilot licence shall demonstrate 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 —

- (a) pre-flight procedures, including the preparation of the operational flight plan and filing of the air traffic service flight plan;
- (b) normal flight procedures and manoeuvres during all phases of flight;
- (c) abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as engine, systems and airframe;
- (d) procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation and the use of checklists; and
- (e) in the case of an aeroplane and powered-lift, procedures and manoeuvres for instrument flight as described in regulation 62, including simulated engine failure.

(2) An applicant shall, in the case of an aeroplane, have demonstrated the ability to perform the procedures and manoeuvres, described in subregulation (1), as a pilot-in-command of a multi-engine aeroplane.

(3) The applicant shall have demonstrated the ability to perform the procedures and manoeuvres, required for an airline transport pilot licence, with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot licence and to —

- (a) recognise and manage threats and errors;
- (b) 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;
- (c) operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;
- (d) perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight;
- (e) exercise good judgement and airmanship, to include structured decision making and maintenance of situational awareness; and
- (f) communicate effectively with other flight crew members and effectively perform procedures for crew incapacitation, crew coordination, standard operating procedures and the use of a checklist.

Medical
fitness

57. An applicant for an airline transport pilot licence shall hold a current class 1 medical certificate.

Privileges and
conditions of
airline transport
pilot licence

58. (1) Subject to compliance with the requirements specified in these Regulations, the privileges of the holder of an airline transport pilot licence shall be to —

- (a) exercise all the privileges of the holder of a private pilot licence and commercial pilot licence in an aircraft within the appropriate aircraft category and, in the case of an aeroplane or powered-lift category, of an instrument rating; and
- (b) act as a pilot-in-command, in commercial air transportation, of an aircraft within the appropriate category and certificated for operation with more than one pilot.

(2) Where the holder of an airline transport pilot licence in the aeroplane category has previously held only a multi-crew pilot licence, the privileges of the licence shall be limited to multi-crew operations unless the holder has met the requirements established in regulations 50 (1) (a), 50 (2), 50 (3) and any limitation of the privileges shall be endorsed on the licence.

B — Specific requirements for aeroplane category rating

59. (1) An applicant for an airline transport pilot licence shall have completed not less than 1500 hours of flight time as a pilot in an aeroplane. Experience

(2) The Authority shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight of 1500 hours:

Provided that 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.

(3) The applicant shall have completed, in an aeroplane, not less than —

- (a) 500 hours as a pilot-in-command under supervision; or
- (b) 250 hours —
 - (i) as a pilot-in-command, or
 - (ii) made up of not less than 70 hours as a pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;
- (c) 200 hours of cross-country flight time, of which not less than 100 hours shall be as a pilot-in-command or as a pilot-in-command under supervision;
- (d) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and
- (e) 100 hours of night flight as a pilot-in-command or as a co-pilot.

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

60. An applicant for an airline transport pilot licence shall have received dual instruction required for the issue of — Flight instruction

- (a) a commercial pilot licence with an aeroplane category rating;
- (b) an instrument rating; and
- (c) where applicable, a multi-crew pilot licence appropriate to the aeroplane category.

C — Specific requirements for helicopter category rating

61. (1) An applicant for an airline transport pilot licence with a helicopter category rating shall have completed not less than 1000 hours of flight time, as a pilot of a helicopter. Experience

(2) The Authority shall determine whether experience as a pilot under instruction, in a flight simulation training device, is acceptable as part of the total flight time of 1000 hours and 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.

(3) The applicant shall have completed in helicopters not less than —

- (a) 250 hours —
 - (i) as a pilot-in-command, or
 - (ii) made up of not less than 70 hours as a pilot-in-command and the necessary additional flight time as a pilot-in-command under supervision;

- (b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as a pilot-in-command or as a pilot-in-command under supervision;
- (c) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time; and
- (d) 50 hours of night flight as a pilot-in-command or as a co-pilot.
- (4) Where the applicant has flight time as a pilot of an aircraft in other categories, the Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements under subregulation (1) may be reduced accordingly.
- 62.** An applicant for airline transport pilot licence with a helicopter rating shall have received flight instruction required for the issue of a commercial pilot licence.

Flight instruction

D — Specific requirements for powered-lift category rating

- 63.** (1) An applicant for an airline transport pilot licence with a powered-lift category rating shall have completed not less than 1500 hours of flight time as a pilot of a powered-lift.
- (2) The Authority shall determine whether experience as a pilot under instruction, in a flight simulation training device, is acceptable as part of the total flight time of 1500 hours.
- (3) The applicant shall have completed in a powered-lift not less than —
- (a) 250 hours —
- (i) as a pilot-in-command, or
- (ii) made up of not less than 70 hours as a pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;
- (b) 100 hours of cross-country flight time, of which not less than 50 hours shall be as a pilot-in-command or as a pilot-in-command under supervision;
- (c) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and
- (d) 25 hours of night flight as a pilot-in-command or as a co-pilot.
- (4) The applicant shall have received dual flight instruction required for issuance of a commercial pilot licence and an instrument rating.
- (5) Where the applicant has flight time as a pilot of an aircraft in other categories, the Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements under subregulation (1) can be reduced.

Experience

- 64.** An applicant for an airline transport pilot licence with a helicopter powered-lift category licence rating shall have received flight instruction required for the issue of a commercial pilot licence.

Flight instruction

PART IX — Instrument rating (aeroplane, airship, helicopter and powered-lift categories)

- 65.** An applicant for an instrument rating 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 —

Knowledge requirements

- (a) air law, —
 - (i) rules and regulations relevant to flight under instrument flight rules, and
 - (ii) related air traffic service practices and procedures;
- (b) aircraft general knowledge for the aircraft category applied for, —
 - (i) use, limitation and serviceability of avionics, electronic device and instruments necessary for the control and navigation of an aircraft under instrument flight rules and in instrument meteorological conditions,
 - (ii) use and limitations of autopilot, and
 - (iii) compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;
- (c) flight performance and planning for the aircraft category being sought, —
 - (i) pre-flight preparations and checks appropriate to flight under instrument flight rules, and
 - (ii) operational flight planning; preparation and filing of air traffic service flight plans under instrument flight rules and altimeter setting procedures;
- (d) human performance for the aircraft category applied for and human performance relevant to instrument flight in aircraft including principles of threat and error management;
- (e) meteorology for the aircraft 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,
 - (ii) altimetry,
 - (iii) effects of icing; frontal zones penetration procedures and hazardous weather avoidance, and
 - (iv) in the case of a helicopter and powered-lift, effects of rotor icing;
- (f) navigation for the aircraft category applied for —
 - (i) practical air navigation using radio navigation aids, and
 - (ii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight and identification of radio navigation aids;
- (g) operational procedures for the aircraft category applied for —
 - (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, and
 - (iii) precautionary and emergency procedures; safety practices associated with flight under instrument flight rules; obstacle clearance criteria; and
- (h) radiotelephony;
- (i) communication procedures and phraseology as applied to aircraft as applied to aircraft under instrument flight rules; and
- (j) action to be taken in case of communication failure.

Skills requirements

66. (1) An applicant for an instrument rating 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, specified by the Authority, with a degree of competency appropriate to the privilege granted to the holder of an instrument rating and to —

- (a) recognise and manage threats and errors;
- (b) operate the aircraft for the category being sought within its limitations;
- (c) complete all manoeuvres with smoothness and accuracy;
- (d) exercise good judgement and airmanship;
- (e) apply aeronautical knowledge; and
- (f) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(2) Where the privileges of the instrument rating are exercised at night or under instrument flight conditions, the applicant shall have demonstrated the ability to operate multi-engine aircraft, within the appropriate category, by reference solely to instruments with one engine inoperative or simulated inoperative.

Medical fitness

67. An applicant for an instrument rating, who holds a private pilot licence, shall have established his or her hearing acuity on the basis of compliance with the hearing requirements for the issue of a class 1 medical certificate.

Privileges of instrument rating

68. Subject to compliance with the requirements specified in these Regulations, the privileges of the holder of an instrument rating with a specific aircraft category shall be to pilot that category of aircraft under instrument flight rules.

Conditions for exercising privileges of instrument rating

69. A holder of an instrument rating shall, before exercising the privileges on a multi-engine aircraft, meet the skills requirements provided in regulation 66 (2).

Experience

70. (1) An applicant for an instrument rating shall hold a pilot licence for the aircraft category being sought.

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

- (a) 50 hours of cross-country flight time as a pilot-in-command of an aircraft category acceptable to the Authority, of which not less than 10 hours shall be in the aircraft category sought; and
- (b) 40 hours of instrument in an aircraft of which not more than 20 hours, or 30 hours where a flight simulator is used, may be instrument ground time which ground time shall be under the supervision of an authorised instructor.

Flight instruction

71. (1) An applicant for an instrument rating shall have gained not less than 10 hours of instrument flight time required in regulation 70 (2) (a) while receiving dual instrument flight instruction in the aircraft category being sought, from an authorised flight instructor.

(2) The instructor shall ensure that the applicant has operational experience to the level of performance required for the holder of an instrument rating in —

- (a) pre-flight procedures, including the use of the flight manual or equivalent document, and appropriate air traffic service documents in the preparation of an instrument flight rules flight plan;
- (b) pre-flight inspection, the use of checklists, taxiing and pre-take-off checks;
- (c) procedures and manoeuvres for instrument flight rules operation under normal, abnormal and emergency conditions covering at least —

- (i) transition to instrument flight on take-off,
 - (ii) standard instrument departures and arrivals,
 - (iii) en-route instrument flight rules procedures,
 - (iv) holding procedures,
 - (v) instrument approaches to specified minima,
 - (vi) missed approach procedures,
 - (vii) landing from instrument approaches; and
 - (d) 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 a multi-engine aircraft within the appropriate category from an authorised flight instructor.
- (4) 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.

PART X — Flight instructor rating (aeroplane, airship, helicopter and powered-lift categories)

72. (1) An applicant for a flight instructor rating shall have met the knowledge requirements for the issue of a commercial pilot licence appropriate to the aircraft category to be included in the licence. Knowledge requirements

(2) 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 —

- (a) techniques of applied instruction; and
- (b) assessment of student performance in those subjects in which ground instruction is given;
- (c) the learning process;
- (d) elements of effective teaching;
- (e) student evaluation and testing and training philosophies;
- (f) training programme development;
- (g) lesson planning;
- (h) classroom instructional techniques;
- (i) use of training aids, including flight simulation training devices as appropriate;
- (j) analysis and correction of student errors;
- (k) human performance relevant to flight instruction including principles of threat and error management; and
- (l) hazards involved in simulating system failures and malfunctions in such aircraft.

73. An applicant for a flight instructor rating 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. Skills requirements

74. An applicant for a flight instructor rating shall have met the experience requirements for the issue of a commercial pilot licence specified for an aeroplane, helicopter, powered-lift and airship category, as appropriate. Experience

Flight instruction

75. An applicant for a flight instructor rating shall, under the supervision of a flight instructor, have —

- (a) received instruction in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
- (b) practised instructional techniques in those flight manoeuvres and procedures in flight instruction to be given.

Privileges and conditions of instructor rating

76. (1) Subject to compliance with the requirements specified in these Regulations, the privileges of a flight instructor rating shall be to —

- (a) supervise solo flights by a student pilot; and
- (b) carry out flight instruction for the issue of a private pilot licence, commercial pilot licence, instrument rating and flight instructor rating: Provided that the flight instructor —
 - (i) holds at least the licence and rating for which instruction is being given, in the appropriate aircraft category,
 - (ii) holds the licence 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 licence.

(2) An applicant, in order to carry out instruction for a multi-crew pilot licence, shall have met all the instructor rating requirements.

PART XI — *Glider pilot licence*

Age requirements

77. An applicant for a glider pilot licence shall be at least 16 years of age.

Knowledge requirements

78. An applicant for a glider pilot licence shall have demonstrated a level of knowledge, appropriate to the privileges granted to the holder of a glider pilot, in at least the following subjects —

- (a) air law, —
 - (i) rules and regulations relevant to the holder of a glider pilot licence,
 - (ii) rules of the air, and
 - (iii) appropriate air traffic service practices and procedures;
- (b) aircraft general knowledge, —
 - (i) principles of operation of glider systems and instruments, and
 - (ii) operating limitations of gliders; relevant operational information from the flight manual or other appropriate document;
- (c) flight performance, planning and loading, —
 - (i) the effects of loading and mass distribution on flight characteristics including mass and balance considerations,
 - (ii) the use and practical application of launching, landing and other performance data, and
 - (iii) pre-flight and en-routing flight planning appropriate to operations under VFR,
 - (iv) appropriate air traffic service procedures,
 - (v) altimeter setting procedures, and
 - (vi) operations in areas of high-density traffic;
- (d) human performance relevant to the glider pilot including principles of threat and error management;
- (e) meteorology, the application of elementary aeronautical meteorology, use of, and procedures for obtaining meteorological information and altimetry;

- (f) practical aspects of air navigation and dead-reckoning techniques and use of aeronautical charts;
- (g) operational procedures —
 - (i) the use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations,
 - (ii) the different launch methods and associated procedures, and
 - (iii) the appropriate precautionary and emergency procedures including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;
- (h) the principles of flight relating to gliders; and
- (i) communication procedures, VFR operations and radio failure procedures.

79. (1) An applicant for a glider pilot licence 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 shall have been performed.

Experience

(2) Where the applicant has flight time as a pilot of an aeroplane, the Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements under subregulation (1) may be reduced.

(3) The applicant shall have gained, under the appropriate supervision, operational experience in gliders in at least the following areas —

- (a) pre-flight operations, including glider assembly and inspection;
- (b) techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures and signals used;
- (c) traffic pattern operations, collision avoidance precautions and procedures;
- (d) control of the glider by external visual reference;
- (e) flight throughout the flight envelope;
- (f) recognition of and recovery from incipient, full stalls and spiral dives;
- (g) normal and crosswind launches, approaches and landings;
- (h) cross-country flying using visual reference and dead-reckoning; and
- (i) emergency procedures.

80. An applicant for a glider pilot licence shall have demonstrated the ability to perform as pilot-in-command of a glider, the procedures and manoeuvres provided for in regulation 79, with a degree of competency appropriate to the privileges granted to the holder of glider pilot licence and to —

Skills requirements

- (a) recognise and manage threats and errors;
- (b) operate the glider within its limitations;
- (c) complete all manoeuvres with smoothness and accuracy;
- (d) exercise good judgement and airmanship;
- (e) apply aeronautical knowledge; and
- (f) maintain control of the glider at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

81. An applicant for a glider pilot licence shall hold a current class 2 medical certificate.

Medical fitness

82. (1) Subject to compliance with the requirements specified in these Regulations, the holder of a glider pilot licence shall act as a pilot-in-command of any glider provided the licence holder has operational experience in the launching method used.

Privileges and conditions of glider pilot licence

(2) If passengers are to be carried, the licence holder shall have completed not less than 10 hours of flight time in gliders.

PART XII — *Free balloon pilot licence*

Age
requirements

83. An applicant for a free balloon pilot licence shall be at least 16 years of age.

Knowledge
requirements

84. An applicant for a free balloon pilot licence shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a free balloon pilot licence, in at least the following subjects —

- (a) air law, —
 - (i) rules and regulations relevant to the holder of a free balloon pilot licence,
 - (ii) rules of air, and
 - (iii) the appropriate air traffic services practices and procedures;
- (b) aircraft general knowledge, —
 - (i) the principles of operation of free balloon systems and instruments,
 - (ii) the operating limitations of free balloons; the relevant operational information from the flight manual or other appropriate document, and
 - (iii) the physical properties and practical application of gases used in free balloons;
- (c) flight performance, planning and loading, —
 - (i) the effects of loading on flight characteristics including mass calculations,
 - (ii) the use and practical application of launching, landing and other performance data, including the effect of temperature, and
 - (iii) pre-flight and en-route flight planning appropriate to the operations under visual flight rules, appropriate air traffic services procedures, altimeter setting procedures and operations in areas of high density traffic;
- (d) human performance relevant to the free balloon pilot including the principles of threat and error management;
- (e) meteorology, —
 - (i) the application of elementary aeronautical meteorology,
 - (ii) the use of and procedures for obtaining meteorological information, and
 - (iii) altimetry,
- (f) navigation, —
 - (i) the practical aspects of air navigation and dead-reckoning techniques, and
 - (ii) the use of aeronautical charts;
- (g) operational procedures, —
 - (i) the use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and
 - (ii) the appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;
- (h) the principles of flight relating to free balloons; and
- (i) communication procedures and phraseology as appropriate to VFR operations and action to be taken in case of communication failure.

85. (1) An applicant for a free balloon pilot licence shall have completed not less than 16 hours of flight time as a pilot of a free balloon including at least eight launches and ascents of which one shall be solo. Experience

(2) The applicant shall have gained operational experience in free balloons, under appropriate supervision, in free balloons in at least the following areas —

- (a) pre-flight operations, including balloon assembly, rigging, inflation, mooring and inspection;
- (b) techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;
- (c) collision avoidance precautions;
- (d) control of the free balloon by external visual reference;
- (e) recognition of and recovery from, rapid descents;
- (f) cross-country flying using visual reference and dead-reckoning;
- (g) approaches and landings, including ground handling; and
- (h) emergency approaches.

(3) If the privileges of the licence are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying.

(4) A holder of a free balloon pilot licence shall have completed not less than 35 hours of flight time, including 20 hours as a pilot of a free balloon if the privileges of the licence are to be exercised for remuneration or hire.

86. An applicant for a free balloon pilot licence shall have demonstrated the ability to perform as a pilot-in-command of a free balloon, the procedures and manoeuvres described in regulation 85 (2) with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence, and to recognize, manage threats and errors and — Skills requirements

- (a) operate the free balloon within its limitations;
- (b) complete all manoeuvres with smoothness and accuracy;
- (c) exercise good judgement and airmanship;
- (d) apply aeronautical knowledge; and
- (e) maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

87. An applicant for a free balloon pilot licence shall hold a current Class 2 Medical Certificate. Medical fitness

88. (1) Subject to compliance with the requirements specified in these Regulations, the privileges of a holder of a free balloon pilot licence shall be to act as a pilot-in-command of any free balloon provided that the licence holder has operational experience in hot air or gas balloons, as appropriate. Privileges of free balloon pilot licence

(2) If the privileges of the licence are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying.

PART XIII — Student Remote Pilot

89. (1) 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. General requirements

(2) A student remote pilot shall not fly an Adaptive Internet Protocol (RPA) solo unless under the supervision of, or with the authority of, an authorised RPA instructor.

(3) 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.

Medical fitness requirements

90. The Authority shall not permit a student remote pilot to fly an RPA solo unless he or she holds a current Class 3 or a current Class 1 Medical Assessment.

PART XIV — *Remote Pilot*

General requirements

91. 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.

Age requirement

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

Knowledge requirement

93. The applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a remote pilot licence and appropriate to the category of Radioisotope Power System (RPA) and associated RPS intended to be included in the remote pilot licence, in at least the following subjects:

(a) air law, —

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

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

(b) 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 —

(aa) principles of operation and function of systems and instruments,

(bb) use and serviceability checks of equipment and systems of appropriate RPS, and

(cc) 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, and
 - (cc) procedures in the event of C2 link malfunction, and
- (xi) detect and avoid capabilities for RPAS;
- (c) Flight performance, planning and loading, —
 - (i) effects of loading and mass distribution on RPA 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 RPAS operations under IFR; preparation and submission of air traffic services flight plans under IFR; appropriate air traffic services procedures; altimeter setting procedures, and
 - (iv) in the case of airships, rotorcraft and powered-lifts, effects of external loading on handling;
- (d) Human performance, —
 - (i) human performance relevant to RPAS and instrument flight, including principles of TEM;
- (e) 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, and
 - (v) in the case of high altitude operations, practical high altitude meteorology, including interpretation and use of weathers reports, charts and forecasts, jetstreams;
- (f) 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, and
 - (iv) principles and characteristics of self-contained and external-referenced navigation systems; operation of RPAS equipment;
- (g) Operational procedures, —
 - (i) application of TEM 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) 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, and
 - (ix) operational procedures for normal and abnormal C2 link operations; and
- (h) Principles of flight, —
- (i) principles of flight, and
 - (ii) radiotelephony, and
 - (iii) communication procedures and phraseology; action to be taken in case.

Skill requirements

94. (1) The applicant shall have demonstrated all the competencies of the adapted competency model approved by the 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.

(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.

Medical fitness requirements

95. The applicant shall hold a current Class 3 Medical Assessment or a current Class 1 Medical Assessment.

Privileges of remote pilot licence holder

96. (1) Subject to compliance with the requirements specified in these regulations, the privileges of the holder of a remote pilot licence shall be:

- (a) to act as remote pilot-in-command of an RPA and associated RPS, certificated for remote single-pilot operation;
- (b) to act as remote co-pilot of an RPA and associated RPS, required to be operated with a remote co-pilot;
- (c) 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
- (d) to act either as remote pilot-in-command or as remote co-pilot of an RPAS under IFR.

(2) Before exercising the privileges at night, the remote pilot licence holder shall have received dual instruction in an RPA and associated RPS in night flying, including take-off, landing and navigation.

B — Specific Requirements for issue of Remote Pilot Licence

Experience requirement

97. The applicant shall have gained experience during training in operating the RPA and associated RPS to successfully demonstrate the competencies required in these Regulations.

Training requirement

98. (1) In order to meet the requirements of the remote pilot licence, 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.

(2) 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.

(3) The applicant shall have received dual remote pilot licence training in an RPA and associated RPS, sought from an authorised RPAS instructor.

(4) 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.

PART XV — Licences and ratings for personnel other than flight crew member

99. (1) An applicant shall, before being issued with a licence or rating for personnel other than a flight crew member, meet such requirements in respect of age, knowledge, experience and where appropriate medical fitness and skill, as are specified for the licence or rating sought.

General requirements

(2) An applicant for a licence or rating for personnel other than a flight crew member shall demonstrate, in a manner determined by the Authority, such requirements in respect of knowledge and skill as are specified for the licence or rating sought.

A. Aircraft maintenance engineer licence

100. An applicant for an aircraft maintenance engineer licence shall be at least 18 years of age.

Age requirement

101. An applicant for an aircraft maintenance engineer licence shall have demonstrated a level of knowledge relevant to the privileges to be granted and appropriate to the responsibilities of an aircraft maintenance licence holder, in the following subjects —

Knowledge requirements

- (a) air law and airworthiness requirements, rules and regulations relevant to an aircraft maintenance licence holder including applicable airworthiness requirements governing certification and continuing airworthiness of an aircraft and approved aircraft maintenance organisation and procedures;
- (b) natural science and aircraft general knowledge, basic mathematics and units of measurements, fundamental principles and theory of physics and chemistry applicable to aircraft maintenance;
- (c) aircraft engineering, —
 - (i) characteristics and applications of the materials of aircraft construction including principles of construction, functioning of aircraft structures and fastening techniques,
 - (ii) engines and their associated systems,
 - (iii) mechanical, fluid, electrical and electronic power sources,
 - (iv) aircraft instrument and display systems,
 - (v) aircraft control systems, and
 - (vi) airborne navigation and communication systems;

Experience	<p>(d) aircraft maintenance, including 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</p> <p>(e) human performance, including principles of threat and error management, relevant to aircraft maintenance.</p> <p>102. An applicant for an aircraft maintenance engineer licence shall have the following experience in the inspection, servicing and maintenance of an aircraft or its components —</p> <p>(a) for the issue of a licence with privileges for the aircraft in its entirety, at least —</p> <p style="margin-left: 2em;">(i) four years, or</p> <p style="margin-left: 2em;">(ii) two years, if the applicant has satisfactorily completed an approved training course; and</p> <p>(b) for the issue of a licence with privileges restricted in accordance with these Regulations, a period of time that will enable a level of competency equivalent to that required in paragraph (a) to be attained, provided that this is not less than, —</p> <p style="margin-left: 2em;">(i) two years, or</p> <p style="margin-left: 2em;">(ii) such a period as the Authority considers necessary to provide an equivalent level of practical experience to an applicant who has satisfactorily completed an approved training course.</p>
Skills requirements	<p>103. An applicant for aircraft maintenance engineer licence shall have demonstrated the ability to perform functions applicable to the privileges to be granted.</p>
Privileges and conditions of holder of aircraft maintenance engineer licence	<p>104. (1) Subject to compliance with the requirements specified in these Regulations, the privileges of the holder of an aircraft maintenance engineer licence shall be to certify the aircraft or parts of the aircraft as airworthy after an authorised repair, modification or installation of an engine, accessory, instrument, and an item of equipment, and to sign a maintenance release following inspection, maintenance operations or routine servicing.</p> <p>(2) The holder of an aircraft maintenance licence specified in subregulation (1) shall exercise the privileges only in respect of —</p> <p>(a) an aircraft entered on the licence in its entirety specifically or under broad categories;</p> <p>(b) the airframes and engine and aircraft systems or components as are entered on the licence either specifically or under broad categories;</p> <p>(c) aircraft avionics systems or components as are entered either specifically or under broad categories:</p> <p style="margin-left: 2em;">Provided that the licence holder is familiar with all the relevant information relating to the maintenance and airworthiness of the particular aircraft for which the licence holder is signing a maintenance release, or such airframe, engine, aircraft system or component and aircraft avionic system or component which the licence holder is certifying as being airworthy; and</p>

(d) on the condition that, within the preceding 24 months, the licence holder has had experience in the inspection, servicing or maintenance of an aircraft or components in accordance with the privileges granted by the licence held for not less than six months, or has met the provision for the issue of a licence with the appropriate privileges, to the satisfaction of the Authority.

(3) Where the Authority authorises an approved maintenance organisation to appoint non-licenced personnel to exercise the privileges of an aircraft maintenance engineer, the person appointed shall meet the requirements specified for the issue of an aircraft maintenance engineer licence.

B — Student Air traffic controller licence

105. Before authorising student air traffic controllers, the Authority shall ensure that student air traffic controllers do not constitute a hazard to air navigation.

106. A student air traffic controller shall not receive instruction in an operational environment unless he or she holds a current Class 3 medical certificate.

107. The applicant shall hold a current Class 3 Medical Assessment or a current Class I Medical Assessment.

C — Specific Requirements for Issue of Remote Pilot Licence

108. The applicant shall have gained experience during training in operating the RPA and associated RPS to successfully demonstrate the competencies required in these regulations.

109. (1) In order to meet the requirements of the remote pilot licence, 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.

(2) 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.

(3) The applicant shall have received dual remote pilot licence training in an RPA and associated RPS, sought from an authorised 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.

(4) 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 licence training in a multi-engined RPA within the appropriate category from an authorised 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.

110. (1) Subject to compliance with the requirements specified in these regulations, the privileges of the holder of a remote pilot licence shall be —

(a) to act as remote pilot-in-command of an RPA and associated RPS, certificated for remote single-pilot operation;

Requirements for authorisation

Medical fitness

Medical fitness requirements

Experience Requirement

Training requirements

Privileges of remote pilot licence holder

- (b) to act as remote co-pilot of an RPA and associated RPS, required to be operated with a remote co-pilot;
 - (c) 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
 - (d) to act either as remote pilot-in-command or as remote co-pilot of an RPAS under IFR.
- (2) Before exercising the privileges at night, the remote pilot licence holder shall have received dual instruction in an RPA and associated RPS in night flying, including take-off, landing and navigation.

D. Air traffic controller licence

Knowledge requirement

111. The applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of an air traffic controller.

E. Air traffic controller ratings

Privileges and conditions of the holder

112. The holder of a licence shall not carry out instructions in an operator environment unless such holder has received specific authorisation from the Authority.

F. Aeronautical station operator licence

General requirement

113. (1) The applicant for an aeronautical station operator licence shall meet the requirements of these Regulations.

(2) Unlicensed persons may operate as aeronautical station operators on the condition that they meet the same requirements.

PART XVI — *RPAS Instructor Rating*

A. Requirements for the issue of the rating

Knowledge requirement

114. (1) The applicant shall demonstrate the ability to effectively assess trainees against the adapted competency model used in the approved training programme.

(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 programmes.

(3) The RPAS instructor training programme shall focus on the development of competence in the following specific areas —

- (a) the adapted competency model of the remote pilot training programme according to the defined grading system used by the RPAS operator or approved training organization;
- (b) in accordance with the assessment and grading system of the RPAS operator or approved training organization, making assessments by observing behaviours; gathering objective evidence regarding the observable behaviours of the adapted competency model used;
- (c) recognising and highlighting performance that meets competency standards;
- (d) determining root causes for deviations below the expected standards of performance; and

- (e) 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 licence 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.
 - (a) techniques of applied instruction;
 - (b) assessment of student performance in those subjects in which ground instruction is given;
 - (c) the learning process;
 - (d) elements of effective teaching;
 - (e) competency-based training principles, including student assessments;
 - (f) evaluation of the training programme effectiveness;
 - (g) lesson planning;
 - (h) classroom instructional techniques;
 - (i) use of training aids, including FSTDs as appropriate;
 - (j) analysis and correction of student errors;
 - (k) human performance relevant to RPAS, instrument flight and remote pilot licence training, including principles of TEM; and
 - (l) hazards involved in simulating system failures and malfunctions in the aircraft.

115. (1) The applicant shall have successfully performed a formal competency assessment, prior to conducting instruction and assessment within a competency-based training programme. Skill requirements

(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 authorised by the Licensing Authority.

116. (1) The applicant shall have met the requirements for the issue of a remote pilot licence, shall maintain competencies and meet the recent experience requirements for the licence. Experience requirement

(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 these Regulations.

117. The applicant shall, under the supervision of an RPAS instructor authorised by the Licensing Authority for that purpose — Training requirement

- (a) have received training in RPAS instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
- (b) have practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide remote pilot licence training.

118. (1) Subject to compliance with the requirements specified in these regulations, the privileges of the holder of an RPAS instructor rating shall be — Privileges of the holder of the rating

- (a) to supervise solo flights by student remote pilots; and
- (b) to carry out remote pilot licence training for the issue of a remote pilot licence and an RPAS instructor rating provided that the RPAS instructor:

- (i) holds at least the remote pilot licence and rating for which instruction is being given, in the appropriate RPA category and associated RPS,
- (ii) holds the remote pilot licence 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 licence.

(2) The applicant, in order to carry out remote pilot licence training in a multi crew operational environment, shall have also met all the instructor qualification requirements.

C — Air traffic controller licence

Requirements
for issue of
licence

119. (1) Before issuing an air traffic controller licence, the Authority shall require an applicant to meet all the requirements for an air traffic controller licence and the requirements of at least one of the ratings set out in these Regulations.

(2) Unlicensed state employees may operate as air traffic controllers on condition that they meet the same requirements.

Age
requirements

120. An applicant for an air traffic controller licence shall not be less than 21 years of age.

Knowledge
requirements

121. An applicant for an air traffic controller licence shall have demonstrated a level of knowledge appropriate to the holder of an air traffic controller licence, in at least the following subjects —

air law, the rules and regulations relevant to an air traffic controller;

(a) air traffic control equipment, the principles, use and limitations of equipment used in air traffic control;

(b) general knowledge, —

(i) the principles of flight,

(ii) the principles of operation and functioning of aircraft, engines and systems, and

(iii) aircraft performance relevant to air traffic control operations;

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

(d) meteorology, —

(i) aeronautical meteorology,

(ii) the use and appreciation of meteorological documentation and information,

(iii) the origin and characteristics of weather phenomena affecting flight operations and safety, and

(iv) altimetry;

(e) navigation, —

(i) the principles of air navigation, and

(ii) the principles, limitation and accuracy of navigation system and visual aids; and

(f) operational procedures, —

(i) air traffic control communication, radiotelephony and phraseology procedures (routine, non-routine and emergency),

(ii) the use of the relevant aeronautical documentation, and

(iii) safety practices associated with a flight.

122. (1) An applicant for air traffic controller licence shall have completed an approved training course in an approved training organisation and demonstrated the required competence having accomplished not less than three months of satisfactory service engaged in the actual control of air traffic under the supervision of an appropriately rated air traffic controller on-the-job training instructor (OJTI).

Experience

(2) The requirements specified for an air traffic controller rating may be credited as part of the experience required in this regulation.

(3) 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.

123. An applicant for an air traffic controller licence shall hold a current class 3 medical certificate.

Medical fitness

D – Air traffic controller ratings

124. The Authority may, on application, issue the following air traffic controller ratings to an applicant who meets the requirements in these Regulations –

Categories of air traffic controller ratings

- (a) aerodrome control rating;
- (b) approach control procedural rating;
- (c) approach control surveillance rating;
- (d) approach precision radar control rating;
- (e) area control procedural rating; and
- (f) area control surveillance rating.

125. An applicant for an air traffic controller rating shall have demonstrated a level of knowledge appropriate to the privileges granted, in the following subjects in so far as they affect the area of responsibility –

Knowledge requirements for air traffic controller rating

- (a) aerodrome control rating, –
 - (i) aerodrome layout, physical characteristics and visual aids,
 - (ii) airspace structure,
 - (iii) applicable rules, procedures and source of information,
 - (iv) air navigation facilities,
 - (v) air traffic control equipment and its use,
 - (vi) terrain and prominent landmarks,
 - (vii) characteristics of air traffic,
 - (viii) weather phenomena, and
 - (ix) emergency and search and rescue plans;
- (b) approach control procedural and area control procedural ratings –
 - (i) airspace structure,
 - (ii) applicable rules, procedures and source of information,
 - (iii) air navigation facilities,
 - (iv) air traffic control equipment and its use,
 - (v) terrain and prominent landmarks,
 - (vi) characteristics of air traffic and traffic flow,
 - (vii) weather phenomena, and
 - (viii) emergency and search and rescue plans;
- (c) approach control surveillance, approach precision radar control and area control surveillance rating; and

- (d) the applicant shall meet the requirements under paragraph (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 the following additional subjects —
 - (i) principles, use and limitations of applicable ATS surveillance systems and associated equipment, and
 - (ii) procedures for the provision of ATS surveillance service, as appropriate, including procedures to ensure appropriate terrain clearance.

Experience

126. (1) An applicant for an air traffic controller licence shall have —

- (a) satisfactorily completed an approved training course; and
 - (b) demonstrated the required competence while providing, under the supervision of an air traffic control (ATC) on-the-job training instructor (OJTI), one or more of the following —
 - (i) an 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 at which the rating is sought,
 - (ii) an approach control procedural, approach control surveillance, area control procedural or area control surveillance rating, a control service for the rating 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
 - (iii) an approach precision radar control rating, not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Authority, not less than 50 of the precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and
 - (c) 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 under subregulation (1) (b) shall have been completed within the six-month period immediately preceding the application.
- (3) The application for a rating shall be made within six months from the completion of experience specified under sub-regulation (1) (b).

Skills requirements

127. An applicant for an air traffic controller rating shall have demonstrated, at a level appropriate to the privileges being granted, the skill, judgement and performance required to provide a safe, orderly and expeditious control service including the recognition and management of threats and errors.

Concurrent issue of two air traffic controller ratings

128 (1) Where two air traffic controller ratings are sought concurrently, the Authority shall determine the applicable requirements on the basis of the requirements for each rating.

(2) The applicable requirements in subregulation (1) shall not be less than those of the more demanding rating.

Privileges and conditions of air traffic controller rating

129. (1) Subject to compliance with the requirements specified in these Regulations, the privileges of the holder of an air traffic controller licence endorsed with one or more of the undermentioned ratings shall be —

- (a) aerodrome control rating, to provide or supervise the provision of aerodrome control service for the aerodrome for which the licence holder is rated;
 - (b) approach control procedural rating, to provide or supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;
 - (c) approach control surveillance rating, to provide or supervise the provision of approach control service with the use of applicable ATS surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service; subject to compliance with the provisions of subregulation (1) (c), the privileges shall include the provision of surveillance radar approaches;
 - (d) approach precision radar control rating, to provide or supervise the provision of precision approach radar service at the aerodrome for which the licence holder is rated;
 - (e) control procedural rating, to provide or supervise the provision of area control service within the control area or portion thereof, for which the licence holder is rated; and
 - (f) area control surveillance rating, to provide or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the licence holder is rated.
- (2) The holder of an air traffic controller licence shall, before exercising the privileges indicated in subregulation (1), be familiar with all pertinent and current information.

(3) The Authority shall not permit the holder of the licence, to carry out instruction in an operational environment unless such holder has received proper authorisation from the Authority.

130. (1) An air traffic controller rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period not exceeding six months.

(2) An air traffic controller rating shall remain invalid until the air traffic controller's ability to exercise the privileges of the rating has been re-established.

Validity of ratings

E – Flight operations officer licence

131. An applicant for a flight operations officer licence shall not be less than 21 years of age.

Age requirements

132. An applicant for a flight operations officer licence shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight operations officer licence, in at least the following subjects –

Knowledge requirements

- (a) air law including rules and regulations relevant for operational control to the holder of a flight operations officer licence and the appropriate air traffic service practices and procedures;
- (b) aircraft general knowledge, –
 - (i) the principles of operation of aeroplane engines, systems and instruments,
 - (ii) the operating limitations of an aeroplane and engines,

- (iii) minimum equipment list, and
- (iv) configuration deviation list;
- (c) flight performance calculation, planning procedures and loading. —
 - (i) the effects of loading and mass distribution on aircraft performance and flight characteristics and mass and balance calculations,
 - (ii) operational flight planning; fuel consumption and endurance calculations, alternate aerodrome selection procedures, en-route cruise control and extended range operation,
 - (iii) the preparation and filing of air traffic services flight plans,
 - (iv) the basic principles of computer-assisted planning systems,
 - (v) take off performance including field length, climb and obstacle criteria and limitation,
 - (vi) cruise performance including minimum altitudes, decompression/ engine out/gear down scenario planning, and
 - (vii) landing performance including approach climb and field length criteria and limitations;
- (d) human performance relevant to operational control duties, including principles of threat and error management;
- (e) 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, and
 - (ii) the interpretation and application of aeronautical meteorological reports, charts and forecasts, codes and abbreviations, use of and procedures for obtaining meteorological information;
- (f) navigation, including principles of navigation with particular reference to instrument flight;
- (g) operational procedures, —
 - (i) the use of aeronautical documentation and standard operating procedures,
 - (ii) the operational procedures for the carriage of freight and dangerous goods,
 - (iii) the procedures relating to aircraft accidents and incidents, and emergency flight procedure, and
 - (iv) the procedures relating to unlawful interference and sabotage of an aircraft;
- (h) principles of flight relating to the appropriate category of aircraft; and
- (i) radio communication procedures for communicating with aircraft and relevant ground stations.

Experience

- 133.** (1) An applicant for a flight operations officer licence shall have gained the following experience —
- (a) a total of two years of service in any one or in any combination of the following capacities, provided that in any combination of experience, the period serviced in any capacity shall be at least 12 months —
 - (i) as a flight crew member in air transportation,
 - (ii) as a meteorologist in an organisation providing operational control to aircraft in air transportation, or
 - (iii) as an air traffic controller, or a technical supervisor of flight operations officers or air transportation flight operations systems;

- (b) at least 12 months as an assistant in the dispatching of air transport; or
- (c) 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.

134. An applicant for a flight operations officer licence shall have demonstrated the ability to —

Skills
requirements

- (a) make an accurate and operationally acceptable weather analysis;
- (b) provide an operationally valid briefing on weather conditions of a specific air route;
- (c) forecast weather trends pertinent to air transportation with particular reference to destination and alternates;
- (d) determine the optimum flight path for a given segment, and create accurate manual or computer generated flight plans;
- (e) 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 licence;
- (f) recognise and manage threats and errors;
- (g) identify and to retrieve aeronautical data and other information relevant for the analysis of operational situations and risks;
- (h) identify and evaluate the risk factors and the possible consequences for flight operations;
- (i) identify and evaluate actions considering risk, the effect on flight safety and regularity of the operation;
- (j) determine an appropriate course of action based on the responsibilities and policies described in the operation manuals;
- (k) apply appropriate standard and non-standard procedures from the operations manual for the initiation, planning, continuation, diversion or termination of flights in the interest of safety of the aircraft and regularity and efficiency of the operation; and
- (l) identify and apply operational limitations and minimums in relation to the weather, aircraft status and appropriate navigation procedures;

135. Subject to compliance with the requirements specified in these Regulations, the privileges of a holder of a flight operations officer licence shall be to serve in that capacity with the responsibility for each area for which the applicant meets the requirements as specified by the Authority.

Privileges of
flight
operations
officer licence

F — Aeronautical station operator licence

136. An applicant for an aeronautical station operator licence shall be at least 18 years of age.

Age
requirements

137. An applicant for an aeronautical station operator licence shall have demonstrated a level of knowledge appropriate to the holder of an aeronautical station operator, in at least the following subjects —

Knowledge
requirements

- (a) general knowledge of air traffic service provided within Botswana;
- (b) operational procedures including radiotelephony procedures, phraseology and telecommunication network;
- (c) rules and regulations applicable to the aeronautical station operator; and
- (d) telecommunication equipment including principles, use and limitation of telecommunication equipment in an aeronautical station.

- Experience** **138.** An applicant for an aeronautical station operator licence shall have —
- (a) satisfactorily completed an approved training course within the 12 months period immediately preceding the application, and shall have served satisfactorily under a qualified aeronautical station operator for not less than two months; or
 - (b) satisfactorily served under a qualified aeronautical station operator for not less than six months during the 12 months period immediately preceding the application.
- Skills requirements** **139.** An applicant for an aeronautical station operator licence shall demonstrate competency in —
- (a) operating the telecommunication equipment used; and
 - (b) transmitting and receiving radiotelephony messages with efficiency and accuracy.
- Privileges of aeronautical station operator licence** **140.** Subject to compliance with the requirements specified in these Regulations, the privileges of the holder of an aeronautical station operator licence shall be to act as an operator in an aeronautical station and before exercising the privileges of the licence, the holder shall be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at the aeronautical station.

PART XVII — Medical requirements for licensing

- Medical certificates** **141. (1)** The Authority shall, on an application made in a format prescribed by the Authority, issue a —
- (a) Class 1 medical certificate which applies to applicants for, and holders of —
 - (i) commercial pilot licence for aeroplane, airship, helicopter and powered-lift,
 - (ii) multi-crew pilot licences for aeroplane, and
 - (iii) airline transport pilot licences for aeroplane, helicopter and powered-lift,
 - (b) Class 2 medical certificate which applies to applicants for, and holders of —
 - (i) private pilot licences for aeroplane, airship, helicopter and powered-lift,
 - (ii) glider pilot licences,
 - (iii) free balloon pilot licences, or
 - (iv) cabin crew member licences; and
 - (c) Class 3 medical certificate which applies to applicants for, and holders of air traffic controller licences.
- (2) An applicant for a medical certificate shall provide the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history and 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 regulation 178.
- (3) The medical examiner shall report to the Authority any individual case where, in the examiner's judgement, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence being applied for or held, is not likely to jeopardise flight safety.

(4) 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.

142. An applicant for a medical assessment issued in accordance with the terms of these Regulations shall undergo a medical examination based on the following requirements —

Requirements
for medical
certificates

- (a) physical and mental;
- (b) visual and colour perception; and
- (c) hearing.

143. An applicant for any class of medical assessment shall be required to be free from —

Physical and
mental
requirements

- (a) any abnormality, congenital or acquired;
- (b) any active, latent, acute or chronic disability;
- (c) any wound, injury or sequelae from operation; or
- (d) any effect or side-effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken, and

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.

144. (1) The methods in use for the measurement of visual acuity are likely to lead to differing evaluations and to achieve uniformity, Contracting States shall ensure that equivalence in the methods of evaluation are obtained.

Visual acuity
test
requirements

(2) The following shall be conducted for tests of visual acuity —

- (a) visual acuity tests shall be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60 cd/m²); and
- (b) visual acuity shall be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant and appropriate to the method of testing adopted.

145. (1) The Authority shall use such methods of examination as shall guarantee reliable testing of colour perception.

Colour
perception
requirements

(2) An applicant shall demonstrate the ability to perceive readily, those colours the perception of which is necessary for the safe performance of duties.

(3) The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission on Illumination (CIE).

(4) An applicant obtaining a satisfactory result as prescribed by the Authority shall be assessed as fit and an applicant who fails to obtain a satisfactory result in such a test shall be assessed as unfit unless he or she is able to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights.

(5) An applicant who fails to meet the criteria in subregulations (1) to (4) shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

146. (1) The Authority shall use such methods of examination as shall guarantee reliable testing of hearing.

Hearing test
requirements
for medical
certificates

(2) An applicant shall demonstrate a hearing performance sufficient for the safe exercise of their licence and rating privileges.

(3) An applicant for Class 1 medical assessments shall be tested by —

- (a) 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; or

	<p>(b) other methods providing equivalent results may be used.</p> <p>(4) An applicant for Class 3 medical assessments shall be tested by —</p> <p>(a) 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; or</p> <p>(b) other methods providing equivalent results may be used.</p> <p>(5) An applicant 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.</p> <p>(6) At medical examinations, other than those referred to under subregulations (3) and (4), where audiometry is not performed, an applicant shall be tested in a quiet room by whispered and spoken voice tests.</p>
Class 1 medical certificate	<p>147. (1) An applicant for a commercial pilot licence or airline transport licence shall undergo an initial medical examination for the issue of a class 1 medical certificate.</p> <p>(2) Except where otherwise stated in these Regulations, holders of commercial pilot licences multi-crew pilot licences for aeroplane, or airline transport pilot licences – for aeroplane, helicopter or powered-lift shall have their Class 1 medical assessments renewed at intervals not exceeding those specified in these Regulations.</p> <p>(3) The Authority shall issue a class 1 medical certificate when an applicant has met all the requirements of these regulations and Schedule 3 to these Regulations.</p>
Class 2 medical certificate	<p>148. (1) An applicant for a private pilot licence shall undergo an initial medical examination for the issue of a class 2 medical certificate.</p> <p>(2) Except where otherwise stated in this Part, a holder of a private pilot licence and cabin crew licence shall have his or her class 2 medical certificate renewed at intervals not exceeding those specified in this Part.</p> <p>(3) A class 2 medical certificate shall be issued when the applicant complies with the requirements of this Part and Schedule 3 to these Regulations.</p>
Class 3 medical certificate	<p>149. (1) An applicant for an air traffic controller licence shall undergo an initial medical examination for the issue of a class 3 medical certificate.</p> <p>(2) Except where otherwise stated in this Part, a holder of an air traffic controller licence shall have his or her class 3 medical certificate renewed at intervals not exceeding those specified in this Part and the Schedule 3 to these Regulations.</p>
Duration and renewal of medical certificate	<p>150. (1) Subject to subregulations (2) and (3), a medical certificate shall be valid from the date of the medical examination, for a period not exceeding —</p> <p>(a) 60 months for an aeroplane, airship, helicopter and powered-lift private pilot licence;</p> <p>(b) 12 months for an aeroplane, airship, helicopter and powered-lift commercial pilot licence;</p> <p>(c) 12 months for an aeroplane multi-crew pilot licence;</p> <p>(d) 12 months for an aeroplane, helicopter and powered-lift airline transport pilot licence;</p> <p>(e) 60 months for a glider pilot licence;</p> <p>(f) 60 months for a free balloon pilot licence; and</p> <p>(g) 48 months for an air traffic controller licence.</p>

(2) When a holder of an airline transport pilot licence in an aeroplane, helicopter and powered-lift, or a commercial pilot licence in an aeroplane, airship, helicopter and powered-lift, engaged in single-crew commercial air transport operations carrying passengers, has passed his or her 40th birthday, the period of validity specified in subregulation (1) shall be reduced to six months.

(3) When a holder of a private pilot licence in aeroplane, airship, helicopter and powered-lift, or a free balloon pilot licence, glider pilot licence or an air traffic controller licence has passed his or her 40th birthday, the period of validity specified in subregulation (1) shall be reduced to 24 months and where such licence holder has attained the age of 50 years, the period of validity shall be further reduced to 12 months.

(4) When a holder of an airline transport pilot licence in an aeroplane, helicopter and powered-lift or a commercial pilot licence in an aeroplane, airship, helicopter and powered-lift or a multi-crew pilot licence in an aeroplane, who is engaged in commercial air transport operations, has passed his or her 60th birthday, the period of validity specified in subregulation (1) shall be reduced to six months.

PART XVIII — *Suspension of medical certificate*

151. (1) The Authority shall suspend or revoke a medical certificate, if it is established that an applicant or a certificate holder no longer meets the requirements of a medical certificate under these Regulations. Suspension of medical certificate

(2) In case of doubt of the medical fitness of the holder of a medical certificate, the Authority may —

- (a) require the holder to repeat a complete or partial medical examination as it deems necessary; or
- (b) suspend the certificate in the case of a temporary rejection on medical grounds.

152. The Authority shall notify in writing, the holder of the medical certificate of the suspension and state reasons for the suspension. Notice of suspension

153. The holder of the medical certificate shall surrender the certificate within 14 days of receiving the notice under regulation 152. Surrender of medical certificate

154. The Authority may provide the person whose medical certificate has been suspended with a new medical certificate of lower class if his or her medical fitness allows it. Issue of lower class medical certificate

155. (1) A suspension may be lifted if the medical examination has been passed satisfactorily. Lifting of suspension

(2) Where a suspension has been lifted, the person involved shall receive a new medical certificate unless the medical certificate was revoked.

156. A person shall not hold or be issued with a medical certificate if that person suffers from any disease or disability that could render that person likely to become suddenly unable to either perform assigned duties safely or operate an aircraft safely. Prohibition of medical certification

157. (1) All medical reports and records shall be securely held with accessibility restricted to authorised personnel. Medical records

(2) When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to relevant officials of the Authority.

(3) The period of validity of a medical assessment may be reduced when clinically indicated.

PART IXX — *Requirements for medical examiners*

Aviation
medical
examiners

158. (1) The Authority shall designate and authorise a qualified and medical licensed medical practitioner to —

- (a) be an aviation medical examiner; and
- (b) conduct medical examinations of fitness of applicants for the issue, renewal or re-issue of the licences or ratings, as may be required in these Regulations.

(2) The Authority may, in writing, appoint an aviation medical examiner based outside Botswana to conduct the functions under subregulation (1).

(3) An aviation medical examiner shall receive —

- (a) basic training in aviation medicine for class 2 and class 3 medical examinations on the relevant subjects;
- (b) advanced training in aviation medicine for class 1 medical examinations on the relevant subjects; and
- (c) refresher training for Aviation medical examination at intervals of two years or as determined by the Authority.

(4) An aviation medical examiner shall acquire knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

(5) An aviation medical examiner shall be required to demonstrate competency to the Authority before initial designation and or resignation.

(6) An aviation medical examiner shall have completed at least 10 examinations for a medical certificate per year.

(7) An authorisation for an aviation medical examiner shall be valid for three years and re-authorisation shall be at the discretion of the Authority.

(8) An aviation medical examiner shall submit a signed report to the Authority, after completing the medical examination of an applicant, detailing the results of the examination, and where the medical examination is carried out by a constituted group of aviation medical examiners, the Authority shall appoint the head of the group responsible for coordinating the results of the examination and signing the report.

(9) The Authority shall use the services of physicians experienced in the practice of aviation medicine, where necessary to evaluate reports submitted to it by aviation medical examiners.

(10) The Authority shall have access to medical reports from a designated medical examiner. These reports shall be treated with the confidentiality it deserves.

(11) The medical examiner shall be required to submit sufficient information to the Authority to enable the Authority to undertake medical assessment.

(12) The Authority shall retain the right to reconsider any action of an aviation medical examiner.

(13) Where the medical report is submitted to the Authority in electronic format, adequate identification of the aviation medical examiner shall be established.

(14) If the medical examination is carried out by two or more medical assessors, 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.

PART XX — *Requirements for medical examination*

159. (1) An applicant for a licence or rating, where medical fitness is prescribed, shall sign and furnish to the aviation medical examiner a declaration for medical stating whether he or she has previously undergone such an examination and, if possible, state the results of the examination.

Aviation
medical
examiners

(2) An applicant who attends a medical examination or test for the issuing of a medical certificate shall —

- (a) produce proof of his or her identity;
- (b) produce for inspection any licence held for which the certificate is required and the most recent medical certificate held, if any; and
- (c) provide the Aviation Medical Examiner with a personal statement of medical facts concerning personal, familial and hereditary history and sign a declaration confirming the accuracy, completeness and truthfulness of the information contained in the medical examination form.

(3) Provide the Aviation Medical Examiner with a personal statement of medical facts concerning personal, familial and hereditary history and sign a declaration confirming the accuracy, completeness and truthfulness of the information contained in the medical examination form.

(4) An applicant for a medical certificate shall provide the aviation medical examiner with a personal certified statement of medical facts concerning personal, familial and hereditary history.

(5) An applicant for a medical certificate shall produce proof of identification.

(6) Any false declaration to an aviation medical examiner made by an applicant for a licence or rating shall be reported to the Authority for appropriate action.

(7) A flight crew member or an air traffic controller shall not exercise the privileges of his or her licence unless he or she holds a current medical certificate, appropriate to the licence, except where otherwise stated in these Regulations.

160. (1) For the initial issue of the medical certificate, the period of validity shall begin on the date the medical examination is performed.

Validity of
medical
Assessment

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

(3) The period of validity of a Medical Assessment may be extended, at the discretion of the Licensing Authority, up to 45 days.

(4) If the medical examination is carried out by two or more medical examiners, Contracting States or 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.

161. (1) Where the medical requirements prescribed for a particular licence are not met the appropriate medical certificate will not be issued, renewed or re-issued unless the following conditions are met —

Special
circumstances
for aviation
medical
examination

- (a) an accredited medical conclusion indicates that in the special circumstances, the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize light safety;
- (b) the relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and

(c) the licence is endorsed by the Authority with any special limitation or limitations when the safe performance of the licence holder's duties is dependent on compliance with such limitation or limitations.

(2) An aviation medical examiner shall report to the Authority any individual case where, in the aviation medical examiner's judgement, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence being applied for, or held, is not likely to jeopardise flight safety.

Decrease in
medical fitness

162. (1) A person who holds a licence issued under these Regulations, shall not exercise the privileges of his or her licence and related ratings at any time when he or she is aware of any decrease in his or her medical fitness which may render him or her unable to safely and properly exercise the privileges of the licence and ratings held.

(2) In the case of a female, the licence holder shall, immediately, inform the Authority of a confirmed pregnancy.

(3) A person who holds a licence issued under these Regulations shall inform the Authority of any decrease in medical fitness of a duration of more than 20 days, which —

(a) requires continued treatment with prescribed medication; or

(b) has required hospital treatment.

Use of
psychoactive
substances

163. A person who holds a licence issued under these Regulations shall not —

(a) exercise the privileges of his or her licence and related ratings while under the influence of any psychoactive substance which might render him or her unable to safely and properly exercise those privileges; and

(b) engage in any abusive use of substances.

Medical history

164. (1) The applicant shall have no established medical history or clinical diagnosis of any of the following —

(a) 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 licence and rating privileges;

(b) epilepsy; or

(c) any disturbance of consciousness without satisfactory medical explanation of cause.

(2) 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 licence and rating privileges.

(3) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

Hearing test
requirement for
medical
certificates

165. (1) An applicant for a medical certificate shall be required to demonstrate hearing performance sufficient for the safe exercise of the privileges of the licence and rating sought.

(2) The hearing test may be conducted using a pure tone audiometer or alternate method that will provide equivalent result

(3) The hearing test shall be performed at the first medical examination and then at specified intervals according to the class of medical examination and age of the applicant.

(4) If a pure tone audiometer is used, the reference zero for calibration shall be that of the International Organisation for Standardization Recommendation R389, 1964.

(5) For hearing tests where audiometry is not performed, an applicant shall be tested in a quiet room by whispered and spoken voice tests under the following conditions —

- (a) a quiet room where the intensity of the background noise is less than 35 dB(A) when measured on “slow” response of an “A”- weighted sound level meter;
- (b) the sound level of an average conversational voice at one metre from the point of output is 60dB(A) and that of a whispered voice is 45dB(A);
- (c) at two metres from the speaker, the sound is 6 dB(A) lower; and
- (d) 12 months interval specified for the commercial pilot licence and airline transport pilot licence that is carrying passengers in single-pilot operations shall be reduced to six months.

(6) Where the holder of a licence and rating is over the age of 50 years the two years interval specified for the private pilot licence and air traffic controller licence shall be reduced to 12 months.

(7) For the initial issue of the medical certificate, the period of validity shall begin on the date the medical examination is performed.

(8) 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.

(9) The requirements for the renewal or re-issue of a medical certificate shall be the same as those for the initial certificate except where otherwise specifically stated.

(10) The renewal of class 1, 2 and 3 medical certificates may be delegated to the authorised aviation medical examiner.

(11) The re-issue of class 1 medical certificate shall be done by the Authority.

(12) The re-issue of class 2 and 3 medical certificates may be delegated by the Authority to an authorised aviation medical examiner.

PART XXI — *Miscellaneous provisions*

166. (1) A person may apply to the Authority for an exemption from these Regulations. Application for exemption

(2) An application for an exemption shall be submitted at least 60 days in advance of the proposed effective date.

(3) A request for an exemption shall contain the applicant’s —

- (a) name;
- (b) physical address and mailing address;
- (c) telephone number;
- (d) facsimile number, if available; and
- (e) electronic mail address, if available.

(4) The application shall be accompanied by a fee determined by the Authority, for technical evaluation.

167. (1) An application for an exemption shall contain the following — Requirements for exemption

- (a) a citation of the specific requirement from which the applicant seeks exemption;
- (b) an explanation of why the exemption is needed;
- (c) a description of the type of operations to be conducted under the proposed exemption;
- (d) the proposed duration of the exemption;

- (e) an explanation of how the exemption is in the public interest;
- (f) a detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question;
- (g) a detailed description of any known safety concerns with the requirement, including information about any relevant accidents or incidents of which the applicant is aware; and
- (h) if the applicant seeks to operate under the proposed exemption outside Botswana's airspace, an indication of whether the exemption would contravene any provision of the International Civil Aviation Organisation Standards and Recommended Practices as well as the regulations pertaining to the airspace in which the operation will occur.

(2) Where the applicant seeks emergency processing of an application for emergency, the application shall contain supporting facts and reasons why the application was not timely filed, and the reasons why it is an emergency.

(3) The Authority may deny an application if the Authority finds that the applicant has not justified the failure to apply for an exemption within the specified time.

Review by
Authority

168. (1) The Authority shall review the application for accuracy and compliance with the requirements under these Regulations.

(2) If the application satisfies the requirements of this regulation and the Authority determines that a review of its merits is justified, the Authority shall publish a detailed summary of the application in the *Gazette* for comments and specify the date by which comments may be received by the Authority for consideration.

(3) Where the requirements of these Regulations have not been met, the Authority shall notify the applicant and take no further action until the applicant corrects the application and re-files it in accordance with these Regulations.

(4) Where an applicant makes an emergency application, the Authority shall publish the application or the Authority's decision as soon as possible after processing the application.

Evaluation of
request

169. (1) Where any comments are received by the Authority, the Authority shall conduct an evaluation of the request to determine whether —

- (a) an exemption would be in the public interest;
- (b) the applicant's proposal would provide a level of safety equivalent to that established by law;
- (c) a grant of the exemption would contravene the applicable International Civil Aviation Organisation Standards and Recommended Practices; and
- (d) the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

(2) Where the Authority decides that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis.

(3) The Authority shall notify the applicant in writing and shall give a detailed summary of its evaluation and decision to grant or deny the request.

(4) The summary referred to in subregulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(5) Where the exemption affects a significant population of the aviation community of Botswana, the Authority shall publish the summary in the aeronautical information circular.

PART XXII — *General provisions*

170. (1) A holder of a licence, certificate or authorisation issued by the Authority shall have it in his or her physical possession or at the work site when exercising the privileges of that licence, certificate or authorisation.

Possession of licence

(2) A crew member of a foreign registered aircraft shall hold a valid licence, certificate or authorisation, including an appropriate and current medical certificate, issued by the State of Registry and has it in his or her physical possession or at the work station when exercising the privileges of that licence, certificate or authorisation.

171. (1) A holder of a licence, rating or a certificate issued under these Regulations shall not exercise the privileges of the licence, rating or certificate while under the influence of any psychoactive substance, by reason of which human performance is impaired.

Use of psychoactive substances

(2) Any safety-sensitive personnel whose functions are critical to the safety of aviation shall not undertake any function while under the influence of any psychoactive substance, by reason of which human performance is impaired.

(3) Any person referred to in subregulations (1) and (2) shall not engage in any kind of problematic use of substances

172. (1) A person who performs any function requiring a licence, rating, qualification or authorisation prescribed by these Regulations directly or by contract may be tested for drug or alcohol usage.

Drug and alcohol testing and reporting

(2) A person who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorise the release of the test results requested by the Authority shall be denied any licence, certificate, rating, qualification, or authorisation issued under these Regulations for a period of up to one year from the date of that refusal.

(3) A person who performs any function requiring a licence, rating, qualification or authorisation prescribed by these Regulations directly or by contract may be tested for drug or alcohol usage.

(4) A person who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorise the release of the test results requested by the Authority shall —

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

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

(5) A person who refuses to submit to a test to indicate the presence of narcotic drugs, marijuana, or depressant or stimulant drugs or substances in the body, when requested by a law enforcement officer or the Authority, or refuses to furnish or to authorise the release of the test results requested by the Authority shall —

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

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

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

- (a) be denied any licence, certificate, rating, qualification, or authorisation issued under these Regulations for a period of up to one year after the date of conviction; or
- (b) have their licence, certificate, rating, qualification, or authorisation issued under these Regulations suspended or revoked.

Inspection of
licence
or certificate

173. A person who holds a licence, certificate, or authorisation required by these Regulations shall present it for inspection upon a request by the Authority or any person authorised by the Authority.

Change of name
and address

174. (1) A holder of a licence, certificate or authorisation issued under these Regulations may apply to change the name on a licence or certificate.

(2) The holder shall include with any such request —

- (a) the current licence or certificate; and
- (b) a court order, or other legal document verifying the name change.

(3) The Authority may change the licence, certificate or authorisation and issue a replacement thereof.

(4) The Authority shall return to the holder the original documents specified in subregulation 2 (b) and retain copies thereof and return the replaced licence, certificate or authorisation with the appropriate endorsement.

(5) A holder of a licence, certificate, or authorisation issued under these Regulations shall notify the Authority of the change in the physical and mailing address and shall do so in the case of —

- (a) physical address, at least fourteen days in advance; and
- (b) mailing address upon any change of address.

Replacement of
documents

175. A person may apply to the Authority in the prescribed form for replacement of documents issued under these Regulations if the documents are lost or destroyed.

Suspension and
revocation

176. (1) The Authority may, if it considers it to be in the public interest, suspend provisionally, pending further investigation, any licence, certificate, approval, permission, exemption, authorisation or such other document issued, granted or having effect under these Regulations.

(2) The Authority may, upon the completion of an investigation which has shown sufficient ground to its satisfaction and if it considers it to be in the public interest, revoke, suspend, or vary any licence, certificate, approval, permission, exemption, authorisation or other document issued or granted under these Regulations.

(3) The Authority may, if it considers it to be in the public interest, prevent any person or aircraft from flying.

(4) A holder or any person having the possession or custody of any licence, certificate, approval, permission, exemption, authorisation or other documents which has been revoked, suspended or varied under these Regulations shall surrender it to the Authority within 14 days from the date of revocation, suspension or variation.

(5) The breach of any condition subject to which any licence, certificate, approval, permission, exemption, authorisation, or any other document has been granted or issued under these Regulations shall render the document invalid during the continuance of the breach.

177. (1) The Authority may charge fees in connection with the issue, validation, renewal, extension or variation of any licence or other document, including the issue of a copy thereof, or the undergoing of any examination, test, inspection or investigation or the grant of any permission or approval, required by, or for the purpose of these Regulations, as the Authority may determine. Fees

(2) Upon an application being made in connection with which any fee is chargeable in accordance with subregulation (1), the applicant shall be required, before the application is considered, to pay the fee so chargeable.

(3) If, after that payment has been made, the application is withdrawn by the applicant or otherwise ceases to have effect or is refused, the Authority shall not refund the payment made.

178. (1) A person who contravenes this provision in relation to an aircraft, the operator of that aircraft and the pilot-in-command, if the operator or, the pilot-in-command is not the person who contravened that provision, he or she shall, without prejudice to the liability of any other person under these Regulations for that contravention, be deemed for the purposes of the following provisions of this subregulation to have contravened that provision. Penalties

(2) Subregulation (1) shall not apply if the person proves that the contravention occurred without his or her consent or connivance and that he or she exercised due diligence to prevent the contravention.

(3) Where a person is charged with contravening a provision of these Regulations orders, notices or proclamations made there under by reason of his having been a member of the flight crew of an aircraft on a flight for the purpose of commercial air transport operations, the flight shall be treated, without prejudice to the liability of any other person under these Regulations, as not having been for that purpose if he proves that he neither knew nor had reason to know that the flight was for that purpose.

(4) A person who contravenes any provision of these Regulations, orders, notices or proclamations made thereunder not being a provision referred to in subregulation (9) commits an offence and is liable to a fine not exceeding P50 000, or to imprisonment for a term not exceeding 10 years, or to both, and in the case of a continuing contravention, each day of the contravention shall constitute a separate offence.

(5) In case an aircraft is involved in a contravention and the contravention is by the owner or operator of the aircraft, the aircraft shall be subject to a lien for the penalty.

(6) Any aircraft subject to alien for the purpose of sub-regulation (5) may be seized by and placed in the custody of the Authority;

(7) The aircraft shall be released from custody of the Authority upon —

- (a) payment of the penalty or the amount agreed upon in compromise;
- (b) deposit of a bond in such amount as the Authority may prescribe, conditioned upon payment of the penalty or the amount agreed upon in compromise; or
- (c) receiving an order of the court to that effect.

(8) Where criminal proceedings are not instituted under subregulation (3), the Authority may impose an appropriate administrative penalty, as set out in Schedule 5 to these Regulations, on a person, organisation or operator who —

- (a) hinders or obstructs an authorised officer, inspector or authorised person in the exercise of his or her powers or in the performance of his or her duties;

- (b) refuses or fails to give his or her name and address, or gives a false name or address when called upon to do so by an authorised officer, or inspector;
- (c) obstructs or impedes another person from exercising any privilege, power or duty conferred on such other person by the Authority or under these Regulations;
- (d) makes or causes to be made, orally or in writing —
 - (i) a misleading or false statement or declaration for the purpose of obtaining any licence, rating, certificate, approval, authorisation, exemption or any other document under these Regulations, or
 - (ii) falsifies, counterfeits, alters, defaces or mutilates, or adds anything to, any licence, rating, certificate, approval, authorisation, exemption or other document issued under these Regulations;
- (e) does, causes or permits to be done, an act contrary to, or fails to comply with, any provision of these Regulations or has failed to perform any duty or function in accordance with prescribed designation procedures attached to the designation;
- (f) exercises a privilege granted by, or uses any licence, rating, certificate, approval, authorisation, exemption or any other document issued under these Regulations, of which he or she is not the holder;
- (g) unless otherwise authorised in these Regulations, permits a licence, rating, certificate, approval, authorisation, exemption or other document issued under these Regulations, of which he or she is the holder, to be used or privileges thereof to be exercised by another person;
- (h) commits an act, by —
 - (i) interference with any flight crew member, air traffic controller or aircraft maintenance engineer,
 - (ii) tampering with any aircraft or any part thereof, or
 - (iii) disorderly conduct or otherwise, which is likely to endanger the safety of an aircraft or its occupants;
- (i) enters in a place within the boundaries of a licensed aerodrome or heliport which is closed to the public, without the permission of an aerodrome or heliport operator; and
- (j) gives false information pertaining to the investigation of an aviation accident or incident.

(9) Where criminal proceedings are instituted, the administrative penalties for offences under subregulation (8) may be used as a guide in determining the appropriate penalty.

179. The Civil Aviation (Personnel Licensing) (General) Regulations are hereby revoked.

Revocation of
Cap. 71:01
(Sub. Leg.)

Transitional
provisions

180. (1) Notwithstanding any other provision of these Regulations, a person who at the commencement of these Regulations, is carrying out aviation related training shall, within 12 months from the date of commencement of these Regulations, or within such longer period as the Minister may, by Order in the *Gazette* prescribe, comply with the requirements of these Regulations or cease to carry out such operations.

(2) A person who fails to comply with these Regulations within the prescribed period commits an offence and shall be liable, to the penalties specified under section 88 of the Act.

Savings

181. Any valid licence, certificate, permit or authorisation issued or granted by the Authority before the commencement of these Regulations shall remain valid until it expires or is revoked.

SCHEDULES

SCHEDULE I (reg. 4 and 5)

SPECIFICATIONS FOR PERSONNEL LICENCES

Personnel licences issued by a Contracting State in accordance with the relevant provisions of these Regulations shall conform to the following specifications —

1. Detail

- (a) A Contracting State having issued a licence shall ensure that other States are able to easily determine the licence privileges and validity of ratings.
- (b) The following details shall appear on the licence —
 - (i) name of State (in bold type),
 - (ii) title of licence (in very bold type),
 - (iii) serial number of the licence, in Arabic numerals, given by the authority issuing the licence,
 - (iv) name of holder in full (in Roman alphabet also if script of national language is other than Roman),
 - (v) date of birth,
 - (vi) address of holder if desired by the State,
 - (vii) nationality of holder,
 - (viii) signature of holder,
 - (ix) authority and, where necessary, conditions under which the licence is issued,
 - (x) certification concerning validity and authorisation for holder to exercise privileges appropriate to licence,
 - (xi) signature of officer issuing the licence and the date of such issue,
 - (xii) seal or stamp of authority issuing the licence,
 - (xiii) ratings including category, class, type of aircraft, airframe, aerodrome control, etc.,
 - (xiv) remarks, such as 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, and
 - (xv) any other details desired by the State issuing the licence.

2. Material — First quality papers or other suitable material, including plastic cards, shall be used and the items mentioned in paragraph 1 (b) shown clearly thereon.

3. Language

When licences are issued in a language other than English, the licence shall include an English translation of at least items (i), (ii), (vi), (ix), (xii), (xiii) and (xiv) under paragraph 1(b) and when provided in a language other than English, authorisations issued shall include an English translation of the name of the State issuing the authorisation, the limit of validity of the authorisation and any restriction or limitation that may be established.

4. Arrangement of items

Item headings on the licence shall be uniformly numbered in roman numerals as indicated in paragraph 1 (b), so that on any licence the number will, under any arrangement, refer to the same item heading.

SCHEDULE 2

(reg. 9)

LANGUAGE PROFICIENCY REQUIREMENTS

1. To meet the language proficiency requirements contained in regulation 9, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the Authority, compliance with the holistic descriptors at paragraph 2 and with the Operational Level (Level 4) of the Language Proficiency Rating Scale in paragraph 3.
2. Holistic descriptors — proficient speakers shall —
 - (a) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
 - (b) communicate on common, concrete and work-related topics with accuracy and clarity;
 - (c) use appropriate communicative strategies to exchange messages and to recognise and resolve misunderstandings including to check, confirm, or clarify information in a general or work-related context;
 - (d) 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
 - (e) use a dialect or accent which is intelligible to the aeronautical community.
3. Rating scales —
 - (a) 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 and 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 and can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances, and
 - (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. May make limited use of discourse markers or connectors and 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, and
 - (b) 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 or accent) or registers.
 - (vi) **Interactions:** responses are immediate, appropriate, and informative. Manages the speaker-listener relationship effectively.
- (c) **Expert Level (Level 6)**
- (i) **Pronunciation:** Pronunciation, stress, rhythm, and intonation, though 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.

SCHEDULE 3
PART A
(reg. 46, 48, 49, 50, 51, 52 and 53)

MULTI-CREW PILOT LICENCE

1. TRAINING

1. In order to meet the requirements of the multi-crew pilot licence in the aeroplane category, the applicant shall have completed an approved training course. The training shall be competency-based and conducted in a multi-crew operational environment.

2. During the training, the applicant shall have acquired the knowledge, skills and attitudes underpinning the competencies required for performing as a co-pilot of a turbine-powered air transport aeroplane certificated for operation with a minimum crew of at least two pilots, under VFR and IFR, day and night flying.

2. ASSESSMENT LEVEL

1. The applicant for the multi-crew pilot licence in the aeroplane category shall have achieved the final competency standard of the approved adapted competency model.

PART B — SIMULATED FLIGHT

1. The FSTDs used to gain the experience specified in these regulations, shall have been approved by the Authority.

2. FSTDs suitable for each multi-crew pilot licence training phase shall be categorized as follows:

- (a) Core flying skills phase. E-training and part tasking devices approved by the Authority that have the following characteristics:
 - involve accessories beyond those normally associated with desktop computers, such as functional replicas of a throttle quadrant, a sidestick controller, or an FMS keypad;
 - involve psychomotor activity with appropriate application of force and timing of responses;
 - otherwise meet, at a minimum, the Type I or III qualifications
- (b) Basic phase. A FSTD that represents a generic turbine-powered aeroplane and has the following characteristics.
 - is equipped with a daylight visual system; and
 - otherwise meets, at a minimum, the Type IV or V qualifications.
- (c) Intermediate phase. A FSTD that represents a multi-engined turbine-powered aeroplane certificated for a crew of two pilots and has the following characteristics:
 - is equipped with an enhanced daylight visual system;
 - is equipped with an autopilot; and
 - otherwise meets, at a minimum, the Type VI qualification;
- (d) Advanced phase. A flight simulation training device that represents a multi-engined turbine-powered aeroplane certificated for a crew of two pilots and has the following characteristics:
 - is equipped with an enhanced daylight visual system;
 - is equipped with an autopilot; and
 - otherwise meets, at a minimum, the Type VII qualification.

SCHEDULE 4
(reg. 141-149)

REQUIREMENTS FOR ISSUANCE OF CLASS 1, CLASS 2
AND 3 MEDICAL CERTIFICATES

Class 1 — *Medical certificate*

1. Certificate issue and renewal

- 1.1 An applicant for a commercial pilot licence for aeroplane, airship, helicopter or powered-lift, a multi-crew pilot licence for aeroplane, or an airline transport pilot licence for aeroplane, helicopter or powered-lift shall undergo an initial medical examination for the issue of a Class 1 medical certificate.
- 1.2 Except where otherwise stated in this section, holders of commercial pilot licences for aeroplane, airship, helicopter or powered-lift, multi-crew pilot licences for aeroplane, or airline transport pilot licences for aeroplane, helicopter or powered-lift shall have their Class 1 medical certificates renewed at intervals not exceeding those specified in regulation 125.
- 1.3 When the Authority is satisfied that the requirements of this section and the general provisions of these Regulations have been met, a Class 1 medical certificate shall be issued to the applicant.

2 Physical and mental requirements

- 2.1 The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
- 2.2 The applicant shall have no established medical history or clinical diagnosis of —
 - (a) an organic mental disorder;
 - (b) mental or behavioural disorder due to use of psychoactive substances and includes dependence syndrome induced by alcohol or other psychoactive substances;
 - (c) schizophrenia or a schizotypal or delusional disorder;
 - (d) a mood (affective) disorder;
 - (e) a neurotic, stress-related or somatoform disorder;
 - (f) a behavioural syndrome associated with physiological disturbances or physical factors;
 - (g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
 - (h) mental retardation;
 - (i) a disorder of psychological development;
 - (j) a behavioural or emotional disorder, with onset in childhood or adolescence; or
 - (k) a mental disorder not otherwise specified, such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.
- 2.3 The applicant shall have no established medical history or clinical diagnosis of any of the following —
 - (a) 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 licence and rating privileges;
 - (b) epilepsy; or
 - (c) any disturbance of consciousness without satisfactory medical explanation of cause.
- 2.4 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 licence and rating privileges.

2.5 The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

2.5.1 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 licence or rating privileges.

2.5.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

2.6 Electrocardiography shall form part of the heart examination for the first issue of a medical certificate.

2.6.1 Electrocardiography shall be included in re-examinations of applicants over the age of 50 years no less frequently than annually.

2.7 The systolic and diastolic blood pressures shall be within normal limits.

2.7.1 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 licence and rating privileges.

2.8 There shall be no significant functional nor structural abnormality of the circulatory system.

2.9 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.

2.10 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 licence or rating privileges.

2.11 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

2.11.1 The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

2.12 Applicants with active pulmonary tuberculosis shall be assessed as unfit.

2.12.1 Applicants with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.

2.13 Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

2.13.1 Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

2.14 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.

2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

2.16.1 Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

2.17 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 licence and rating privileges.

2.18 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 licence and rating privileges.

2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

2.19 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 licence or rating privileges.

2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

2.20 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

2.22 Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

2.25 There shall be —

- (a) no disturbance of vestibular function;
- (b) no significant dysfunction of the Eustachian tubes; and
- (c) no unhealed perforation of the tympanic membranes.

2.25.1 A single dry perforation of the tympanic membrane need not render the applicant unfit.

2.26 There shall be —

- (a) no nasal obstruction; and
- (b) no malformation nor any disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

2.27 Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

3. Visual requirements

The medical examination shall be based on the following requirements —

3.1 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 licence and rating privileges.

3.2 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:

- (a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- (b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

3.3 Applicants may use contact lenses to meet this requirement provided that:

- (a) the lenses are monofocal and non-tinted;
- (b) the lenses are well tolerated; and
- (c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

3.3.1 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

3.3.2 Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial medical certificate and every five years thereafter.

3.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

3.4 The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 3.3.2, 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 3.2; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

3.4.1 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

3.5 The applicant shall be required to have normal fields of vision.

3.6 The applicant shall be required to have normal binocular function.

3.6.1 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.

4 Hearing requirements

4.1 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.

4.1.1 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.

3.4.2 Alternatively, a practical hearing test conducted in flight in the cockpit of an aircraft of the type for which the applicant's licence and ratings are valid may be used.

Class 2 — *Medical certificate*

Certificate issue and renewal

An applicant for a private pilot licence – aeroplane, airship, helicopter or powered-lift, a glider pilot licence, a free balloon pilot licence, shall undergo an initial medical examination for the issue of a Class 2 medical certificate. The Authority shall issue a class 2 medical certificate when it is satisfied that the requirements of these regulations are met.

Physical and mental requirements

- (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
- (2) The applicant shall have no established medical history or clinical diagnosis of —
 - (a) an organic mental disorder;
 - (b) a mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;
 - (c) schizophrenia or a schizotypal or delusional disorder;
 - (d) a mood (affective) disorder;
 - (e) a neurotic, stress-related or somatoform disorder;
 - (f) a behavioural syndrome associated with physiological disturbances or physical factors;
 - (g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
 - (h) mental retardation;
 - (i) a disorder of psychological development;
 - (j) a behavioural or emotional disorder, with onset in childhood or adolescence; or
 - (k) a mental disorder not otherwise specified; such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.
- (3) The applicant shall have no established medical history or clinical diagnosis of any of the following —
 - (a) 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 licence and rating privileges;
 - (b) epilepsy; and
 - (c) any disturbance of consciousness without satisfactory medical explanation of cause.
- (4) 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 licence and rating privileges.
- (5) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (6) 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 licence or rating privileges.
- (7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (8) Electrocardiography shall form part of the heart examination for the first issue of a Medical Certificate after the age of 40. Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less than every two years.

(9) The systolic and diastolic blood pressures shall be within normal limits.

(10) 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 licence and rating privileges. There shall be no significant functional nor structural abnormality of the circulatory system.

(11) There shall be no disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.

(12) 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 licence or rating privileges.

(13) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit. The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(14) Applicants with active pulmonary tuberculosis shall be assessed as unfit. Applicants with quiescent or healed lesions, known to be tuberculous or presumably tuberculous in origin, may be assessed as fit. Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

(15) Applicants with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(16) 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.

(17) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit. Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

(18) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

(19) 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 licence and rating privileges.

(20) 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 licence and rating privileges. Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(21) 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 licence or rating privileges.

(22) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated. Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(23) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy. Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

(24) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(25) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

There shall be —

- (a) no disturbance of the vestibular function;
- (b) no significant dysfunction of the Eustachian tubes; and
- (c) no unhealed perforation of the tympanic membranes.

(26) A single dry perforation of the tympanic membrane need not render the applicant unfit.

There shall be —

- (a) no nasal obstruction; and
- (b) no malformation nor any disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(27) Applicants with stuttering and other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

Visual requirements for class 2 medical certificate

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 licence and rating privileges.

(2) Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

- (a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- (b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

(3) Applicants may use contact lenses to meet this requirement provided that:

- (a) the lenses are monofocal and non-tinted;
- (b) the lenses are well tolerated; and
- (c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses to minimize peripheral field distortion. Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(5) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 6.4.3.2, 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 these regulations; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

(6) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(7) The applicant shall be required to have normal fields of vision. The applicant shall be required to have normal binocular function. 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.

Hearing requirements

(1) 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. 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.

Class 3 — *Medical certificate*

Certificate issue and renewal

Cap. 71:01
(Sub. Leg.)

(1) An applicant for an air traffic controller licence shall undergo an initial medical examination for the issue of a Class 3 medical certificate. Except where otherwise stated in this section, holders of air traffic controller licences shall have their Class 3 medical certificates renewed at intervals not exceeding those specified in the Civil Aviation (Personnel Licensing) (Other Personnel) Regulations.

(2) The Authority shall issue a medical certificate to an applicant who meets the requirements of these Regulations.

Physical and mental requirements

(1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable to perform duties safely. The applicant shall have no established medical history or clinical diagnosis of:

- (a) an organic mental disorder;
- (b) a mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;
- (c) schizophrenia or a schizotypal or delusional disorder;
- (d) a mood (affective) disorder;
- (e) a neurotic, stress-related or somatoform disorder;
- (f) a behavioural syndrome associated with physiological disturbances or physical factors;
- (g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
- (h) mental retardation;
- (i) a disorder of psychological development;
- (j) a behavioural or emotional disorder, with onset in childhood or adolescence; or a mental disorder not otherwise specified; and
- (k) such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

(2) The applicant shall have no established medical history or clinical diagnosis of any of the following —

- (a) 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 licence and rating privileges;
- (b) epilepsy; or
- (c) any disturbance of consciousness without satisfactory medical explanation of cause.

(3) 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 licence and rating privileges. The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(4) 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 licence and rating privileges.

(5) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(6) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate. Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less frequently than every two years. The systolic and diastolic blood pressures shall be within normal limits.

(7) 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 licence privileges. There shall be no significant functional nor structural abnormality of the circulatory system.

(8) There shall be no disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms. 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 licence or rating privileges. Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms shall be assessed as unfit.

(9) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges. Applicants with active pulmonary tuberculosis shall be assessed as unfit. Applicants with quiescent or healed lesions, known to be tuberculous or presumably tuberculous in origin, may be assessed as fit. Applicants with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.

(10) 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. Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(11) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit. 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 licence and rating privileges.

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 licence and rating privileges. 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 licence and rating privileges. Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(12) 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 licence or rating privileges. Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(13) Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(14) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy. Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

(15) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges. The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges. 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 licence and rating privileges. Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

Visual requirements

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, or any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

(2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

- (a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- (b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

(3) Applicants may use contact lenses to meet this requirement provided that:

- (a) the lenses are monofocal and non-tinted;
- (b) the lenses are well tolerated; and
- (c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses. Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60, shall be required to provide a full ophthalmic report prior to initial medical certificate and every five years thereafter.

(5) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(6) The applicant shall have the ability to read, while wearing the correcting lenses, 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 these regulations: if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

(7) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use. The applicant shall be required to have normal fields of vision. The applicant shall be required to have normal binocular function.

(8) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenia and diplopia need not be disqualifying.

Hearing requirements

(1) 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.

(2) 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. Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant's licence and ratings are valid.

SCHEDULE 5
(regulation 178 (8))

ADMINISTRATIVE PENALTIES

(1) The administrative penalties, in respect of the offences under regulation 178 (8), shall apply to an individual as indicated in Table A.

TABLE A
PENALTIES APPLICABLE TO AN INDIVIDUAL

<i>Regulation</i>	<i>1st offence</i>	<i>2nd offence</i>	<i>Subsequent offence</i>
178 (8) (a)	P 5 000	P 10 000	P 15 000
178 (8) (b)	P 5 000	P 10 000	P 15 000
178 (8) (c)	P 5 000	P 10 000	P 15 000
178 (8) (d)	P 15 000	P 20 000	P 25 000
178 (8) (e)	P 10 000	P 20 000	P 30 000
178 (8) (f)	P 10 000	P 20 000	P 30 000
178 (8) (g)	P 10 000	P 20 000	P 30 000
178 (8) (h)	P 10 000	P 20 000	P 30 000
178 (8) (i)	P 10 000	P 20 000	P 30 000
178 (8) (j)	P 5 000	P 10 000	P 15 000

(2) The administrative penalties, in respect of the offences under regulation 178 (8), shall apply to an organisation as indicated in Table B.

TABLE B
PENALTIES APPLICABLE TO AN ORGANISATION

<i>Regulation</i>	<i>1st offence</i>	<i>2nd offence</i>	<i>Subsequent offence</i>
178 (8) (a)	P 15 000	P 30 000	P 50 000
178 (8) (b)	P 15 000	P 30 000	P 50 000
178 (8) (c)	P 15 000	P 30 000	P 50 000
178 (8) (d)	P 15 000	P 30 000	P 50 000
178 (8) (e)	P 25 000	P 40 000	P 60 000
178 (8) (f)	P 25 000	P 50 000	P 80 000
178 (8) (g)	P 25 000	P 50 000	P 80 000
178 (8) (h)	P 35 000	P 60 000	P 100 000
178 (8) (i)	P 25 000	P 50 000	P 120 000
178 (8) (j)	P 15,000	P 30,000	P 80 000

MADE this 27th day of May, 2022.

ERIC M. MOLALE,
Minister of Transport and Public Works.