STATUTORY INSTRUMENTS
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S T A T U T O R Y I N S T R U M E N T S

2014 No. 57.

THE CIVIL AVIATION (PERSONNEL LICENSING) REGULATIONS, 2014

ARRANGEMENT OF REGULATIONS.

Regulation

Regulation

Regulation

SCHEDULES

S T A T U T O R Y I N S T R U M E N T S

2014 No. 57.

The Civil Aviation (Personnel Licensing) Regulations, 2014.

(Under sections 34(2) and 61 of the Civil Aviation Authority Act, Cap 354)

IN EXERCISE of the powers conferred upon the Minister by sections 34(2) and 61 of the Civil Aviation Authority Act, Cap 354, and on the recommendation of the Civil Aviation Authority, these Regulations are made this 6th day of June, 2014.

PART I—PRELIMINARY

1. Title.
These Regulations may be cited as the Civil Aviation (Personnel Licensing) Regulations, 2014.

2. Interpretation.
In these Regulations, unless the context otherwise requires—

"accredited medical conclusion" means the conclusion reached by one or more medical experts acceptable to the Authority for the purposes of the case concerned, in consultation with other experts as necessary;

"aeronautical experience" means pilot time obtained in an aircraft, approved synthetic flight trainer for meeting the training and flight time requirements of these Regulations;

"aeroplane" means a power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight;

"aircraft" means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface;

"aircraft avionics" means designating any electronic device-including its electrical part for use in an aircraft including radio, automatic flight control and instrument systems;

"aircraft-category" means classification of aircraft according to specified basic characteristics such as aeroplane, rotorcraft, glider and lighter-than-air and powered-lift aircraft;

"aircraft certificated for single-pilot operation" means a type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot;

"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;

"Air Traffic Control Service" means a service provided for the purpose of—

(a) preventing collisions—

(i) between aircraft; and

(ii) on the manoeuvring area, between aircraft and obstructions; and

(b) expediting and maintaining an orderly flow of traffic;

"aircraft-type of" means all aircraft of the same basic design including all modifications 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 powerplant) and landing gear of an aircraft and their accessories and controls;

"airmanship" means the consistent use of good judgment and well developed knowledge, skills and attitudes to accomplish flight objectives.

"airship" means a power-driven ligher –than-air aircraft;

"Air Traffic Control unit" is a generic term meaning variously, area control centre, approach control unit or aerodrome control tower;

"appliance" means any 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, is installed in or attached to the aircraft, and is not part of an airframe, powerplant, or propeller;

"approved maintenance organisation (AMO)" means an organisation approved to perform specific aircraft maintenance activities by the Authority including the inspection, overhaul, maintenance, repair or modification and release to service of aircraft or aircraft component;

"approved training organisation" means an organisation approved by and operating under the supervision of a Contracting State in accordance with the requirements of Annex 1 to perform approved training;

"approved training" means training conducted under special curricula and supervision approved by the Authority;

"ATS surveillance system" is a generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft;

"authorised instructor" means a person who—

(a) holds a valid ground instructor licence issued under these Regulations for conducting ground training;

(b) holds a current flight instructor rating issued under these Regulations for conducting ground training or flight training; or

(c) 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, 2014;

"Authority" means the Civil Aviation Authority;

"aviation repair specialist (ARS)" means a person qualified to perform or supervise the maintenance, preventive maintenance, or alteration of aircraft, airframes, aircraft engines, propellers, appliances, components, and parts appropriate to the designated speciality area for which the aviation repair specialist is authorised but only in connection with employment by an AMO;

"balloon" means a non-power-driven lighter-than-air aircraft;

"commercial air transport operation" means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire;

"competency" means a combination of skills, knowledge and attitudes required to perform a task to the prescribed standard;

"competency element" means an action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome;

"competency unit" means a discrete function consisting of a number of competency elements;

"credit" means recognition of alternative means or prior qualifications;

"cabin crew member" means a crew member who performs in the interest of safety of passengers, duties assigned by the operator or the PIC of the aircraft, but who shall not act as a flight crewmember;

"Category II (CAT II) operation" means, a precision instrument approach and landing with a decision height lower than 60m (200) ft), but not lower than 30m (100 ft), and a Runway Visual Range (RVR) not less than 350m;

"Category IIIA (CAT IIIA) operation" means, a precision instrument approach and landing with—

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

(b) a RVR not less than 200m;

"Category IIIB (CAT IIIB) operation" means, a precision instrument approach and landing with-

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

(b) a RVR less than 200m but not less than 50m;

"Category IIIC (CAT IIIC) operation" means a precision instrument approach and landing with no decision height and no Runway Visual Range limitations;

"check-pilot" means a pilot approved by the Authority who has the appropriate training, experience and has demonstrated ability to evaluate and certify to the knowledge and skills of pilots;

"Contracting State" means a State that is signatory to the Convention on International Civil Aviation (Chicago Convention or ICAO);

"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 license, rating, qualification, authorisation, or recurrency required under these Regulations;

"crew resource management (CRM)" means a program designed to improve the safety of flight operations by optimising the safe, efficient, and effective use of human resources, hardware, and information through improved crew communication and co-ordination;

"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;

"currency point" is has the meaning assigned to it in the First Schedule;

"designated medical examiner (DEM)" means a person qualified and licensed in the practice of medicine, designated by the Authority to conduct medical examinations of fitness of applicants and issue reports for the issue or renewal of the licences or certificates or ratings specified in the Civil Aviation (Personnel Licensing) Regulations;

"dual instruction time" means flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft;

"EDTO" means extended diversion time operation;

"error" means an action or inaction by an operational person that leads to deviations from organisational or the operational person's intentions or expectations;

"error management" means the process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors, and mitigates the probability of further errors or undesired state;

"evaluator" means a person employed by a certified Approved Training Organisation who performs tests for licensing, added ratings, authorisations, and proficiency checks that are authorised by the certificate holder's training specification, and who is authorised by the Authority to administer such checks and tests;

"examiner" means any 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;

"facility" means a physical plant, including land, buildings, and equipment, which provides the means for the performance of maintenance, preventive maintenance, or modifications of any article;

"flight crew member" means a licensed crew member charged with duties essential to the operation of an aircraft during flight duty period;

"flight simulation training device" means any one of the following three types of apparatus in which flight conditions are simulated on the ground—

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

(b) a flight procedures trainer which provides a realistic cockpit environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic aircraft systems and the performance and flight characteristics of aircraft of a particular class;

(c) a basic instrument flight trainer which is equipped with appropriate instruments and which simulates the cockpit environment of an aircraft in flight in instrument flight conditions;

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

"heavier-than-air aircraft" means any aircraft deriving 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;

"heliport" means an aerodrome or defined area on a structure intended to be used wholly or in part for the arrival, departure, and surface movement of helicopters;

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

"inspection" means the examination of an aircraft or aircraft component to establish conformity with a standard approved by the Authority;

"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, if a landing is not completed, to a position at which holding or enroute obstacle clearance criteria apply;

"instrument flight time" means the time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points;

"instrument ground time" means time during which a pilot is practising on the ground simulated instrument filght in a flight simulation training device approved by the Authority;

"instrument time" means time in which cockpit instruments are used as the sole means for navigation and control;

"instrument training" means training which is received from an authorised instructor under actual or simulated instrument meteorological conditions;

"kg" means kilogrammes;

"knowledge test" means a test on the aeronautical knowledge areas required for a licence or rating that can be administered in written form or by a computer;

"LAME course" means a training course for maintenance licence ratings in airframe, powerplant and avionics;

"licensed aircraft maintenance engineer" means a person licenced by the Authority to perform defined maintenance upon aircraft or aircraft components;

"licensing Authority" means the Authority designated by a contracting State as responsible for the licensing of personnel;

"lighter-than-air aircraft" means any aircraft supported chiefly by its buoyancy in the air;

"likely" means with a probability of occurring that is unacceptable to the medical assessor;

"maintenance" means the performance of tasks required to ensure the continued airworthiness of an aircraft or aircraft, including any one or combination of overhaul, repair, inspection, replacement, modification, and defect rectification and the embodiment of a modification or repair;

"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 certificate or medical assessment" means the evidence issued by the Authority that the licence holder meets specific requirements of medical fitness;

"medical examiner" means a physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed;

"night" means the time between fifteen minutes after sunset and fifteen 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 clearly be seen at a distance of 4,572 metres;

"NOTAM" means Notice to Airmen;

"performance criteria" means simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved;

"pilot-in-command (PIC)" 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 the 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 time" means that time a person—

(a) serves as a required pilot;

(b) receives training from an authorised instructor in an aircraft, approved synthetic flight trainer; or

(c) gives training as an authorised instructor in an aircraft, approved synthetic flight trainer;

"pilot (to)" means to manipulate the flight controls of an aircraft during flight time;

"powered-lift" means a heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating airfoil(s) for lift during horizontal flight;

"power-lift" means a heavier-than-air aircraft capable of vertical take-off, vertical landing, and low speed flight which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil 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 so as 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 constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and causes or worsens an occupational, social, mental or physical problem or disorder;

"proficiency check" means the process of the check pilot administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period;

"propeller" means for a device for propelling an aircraft that has blades on a powerplant driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation and it includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of powerplants;

"psychoactive substances" means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents but excludes coffee and tobacco;

"quality system" means documented organisational procedures and policies: internal audits 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 license or certificate and forming part thereof, stating special conditions, privileges or limitations pertaining to such license or certificate;

"rendering (a licence) valid (Validation)" means the action taken by a contracting State, as an alternative to issuing its own licence, in accepting a licence issued by any other contracting State as the equivalent of its own licence;

"repair" mean the restoration of an aircraft or aircraft component to a serviceable condition in conformity with an approved standard;

"rest period" means a period free of all restraint, duty or responsibility as specified by the Authority;

"rotorcraft" means a power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors;

"safety-sensitive personnel" means a person including crewmembers, aircraft maintenance personnel and air traffic controllers who might endanger aviation safety if they perform their duties and functions improperly;

"significant" means to a degree or of a nature that is likely to jeopardize flight safety;

"solo flight" means a flight on which a student pilot of the aircraft is the sole occupant of the aircraft;

"solo flight time" means flight time during which a student pilot is the sole occupant of the aircraft;

"specific operating provisions" means a document describing the ratings (class or limited) in detail and contains reference material and process specifications used in performing repair work, along with any limitations applied to an AMO;

"state safety programme (SSP)" 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 sympathomimetics, 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 was physically hazardous, if there has been at any other time an instance of the use of a substance also in a situation in which that use was physically hazardous;

(b) a verified positive drug test result acquired under an anti-drug program or internal program of a State government; or

(c) misuse of a substance that the Authority, based on case history and qualified medical judgment relating to the substance involved, finds that it makes the applicant unable to safely perform the duties or exercise the privileges of the license applied for or held or as 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 events or errors that occur beyond the influence of an operational person, increase operational complexity and which must be managed to maintain the margin of safety;

"threat management" means the process of detecting and responding to the threats with countermeasures that reduce or eliminate the consequences of threats, and mitigate the probability of errors or undesired states;

"training programme" means a program that consists of a course, courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective and may include a core curriculum and a specialty curriculum;

"training time" means the time spent receiving from an authorised instructor flight training, ground training, or simulated flight training in an approved synthetic flight trainer;

"Vmc" means minimum control speed with critical engine inoperative.

3. Application.

These Regulations apply to persons licensed under any Part of these Regulations and any person who engages in an operation governed by any Part of these Regulations without the appropriate licence, operations specifications or similar document required as part of the certification.

PART II—LICENSES, CERTIFICATION, RATINGS AND AUTHORISATIONS.

4. Licenses and certificates issued.

(1) The Authority may issue the following licences and certificates under these Regulations—

(a) Pilot Licences, including—

(i) Student Pilot Licence;

(ii) Private Pilot Licence;

(iii) Commercial Pilot Licence;

(iv) Airline Transport Pilot Licence;

(v) Multi-crew Pilot Licence.

(b) Ground Instructor Licence;

(c) Flight Engineer Licence;

(d) Air Traffic Controller Licence;

(e) Aircraft Maintenance Engineer Licence;

(f) Flight Operations Officer Licence;

(g) Flight Radio Telephony Operator Licence; and

(h) Cabin Crew member Certificate.

(2) Where the applicant does not meet the specific requirements for the issue of a particular licence, he or she shall obtain a student pilot licence to enable him or her to fulfil the eligibility requirements for a pilot licence issued under these Regulations.

(3) Personnel licences issued by the Authority shall conform to the specifications prescribed in the Second Schedule.

5. Ratings issued.

(1) The Authority shall issue the following ratings for pilots—

(a) Category ratings in the following aircraft—

(i) aeroplanes;

(ii) rotorcraft;

(iii) glider;

(iv) free balloon;

(v) powered-lift; and

(vi) airship of a volume of more than 4600 cubic metres.

(b) Class ratings in the following aeroplanes—

(i) single-engine, land;

(ii) single-engine, sea;

(iii) multi-engine, land; and

(iv) multi-engine, sea

(c) Class ratings in the following rotorcraft—

(i) helicopters; and

(ii) gyroplane.

(d) Class ratings in the following lighter-than-air aircraft—

(i) airship; and

(ii) free balloon.

(e) Type ratings in the following aircraft—

(i) aircraft certificated for a single pilot;

(ii) any aircraft certificated for at least two pilots;

(iii) helicopters certificated for single-pilot operations and which have comparable handling, performance and other characteristics.

(f) Instrument ratings in the following aircraft—

(i) instrument – aeroplane;

(ii) instrument – helicopter.

(g) Night rating;

(h) Flight instructor rating;

(i) Ground instructor ratings—

(i) basic;

(ii) advanced;

(iii) instrument.

(2) Where the holder of a pilot licence seeks a licence for an additional category of aircraft, the Authority may endorse the original licence with the new category rating in accordance with sub regulation (1) and any other requirements prescribed in these Regulations appropriate to the privileges for which the category rating is sought.

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

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

(5) The Authority may place the category, class or type rating on a pilot licence when issuing that licence, provided the rating reflects the appropriate category, class, or type of aircraft used to demonstrate skill and knowledge for its issue and the aircraft type is registered in Uganda.

(6) The Authority may issue the following ratings for flight engineers—

(a) reciprocating engine powered including type rating;

(b) turbo propeller powered including type rating; and

(c) turbojet powered including type rating.

(7) The Authority may issue the following ratings for air traffic controllers—

(a) aerodrome control rating;

(b) approach control procedure rating;

(c) approach control surveillance rating;

(d) approach precision radar control rating;

(e) area control procedural rating; and

(f) area radar control surveillance rating.

(8) The Authority may issue the following categories without type ratings for Aircraft Maintenance Engineer Licence—

(i) Category ‘A’ – Aeroplanes;

(ii) Category ‘C’ - Piston engines;

(iii) Category ‘C’ - Gas Turbine engines;

(iv) Category ‘A’ and ‘C’ - Piston Engined Rotorcraft;

(v) Category ‘A’ and ‘C’ - Turbine Engined Rotorcraft;

(vi) Category ‘A’ and ‘C’ - Piston Engined Airship;

(vii) Category ‘A’ and ‘C’ - Turbine Engined Airship;

(viii) Category ‘X’ - Electrical;

(ix) Category ‘X’ - Instruments;

(x) Category ‘X’ - Automatic Pilots -Aeroplanes;

(xi) Category ‘X’ - Automatic Pilots - rotorcraft;

(xii) Category ‘X’ - Compass Compensation and Adjustments;

(xiii) Category R – Radar

(9) The Authority may issue the specific or group type ratings for Aircraft Maintenance Engineer Licence in the following categories but excluding aeroplanes of 13,610 kg (30,000 lb) maximum take off mass (MTOM) or greater for which maintenance has to be carried out and certified under company approval—

(a) Category ‘A’ aeroplanes—

(i) composite material aeroplanes not exceeding 5700 kg MTOM;

(ii) wooden and combined wood and metal aeroplanes: an aeroplane where the primary structures is manufactured from wood or combinations of wood and metal;

(iii) unpressurised aeroplanes not exceeding 2730 kg MTOM;

(iv) pressurised aeroplanes not exceeding 2730 kg MTOM;

(v) unpressurised aeroplanes not exceeding 5700 kg MTOM;

(vi) pressurised aeroplanes not exceeding 5700 kg MTOW;

(vii) unpressurised aeroplanes exceeding 5700 kg MTOM; or

(viii) pressurised aeroplanes exceeding 5700 kg MTOM;

(b) Category ‘C’ Engines—

(i) diesel Engines in Aeroplanes;

(ii) piston Engines in Aeroplanes excluding diesel engines;

(iii) gas-turbine engines in Aeroplanes not exceeding 22.25 Kilo Newton (5000lbf) static thrust including where so endorsed the associated auxilliary power unit (APU) installations;

(iv) gas-turbine engines in Aeroplanes exceeding 22.25 KN (5000lbf) static thrust including where so endorsed the associated auxilliary power unit (APU) installations; or

(v) propeller turbine engines in aeroplanes including where so endorsed the associated APU installations;

(c) Category "A" and "C" Rotorcraft—

(i) piston-engined rotorcraft;

(ii) turbine-engined rotorcraft not exceeding 2730 kg MTOM; or

(iii) turbine-engined rotorcraft above 2730 kg MTOM but below 5700 kg MTOM.

(d) Category "A" and "C" Airship—

(i) piston-engined airship; or

(ii) turbine-engined airship.

(e) Category "X" – Electrical—

(i) aircraft in which the main generation system output is direct current (dc), including alternators having self contained rectifier system, and in which secondary alternators having an individual power rating not exceeding 1.5 KVA may be fitted;

(ii) aircraft in which the main generation system output is dc and which have installed "frequency wild" alternators with an individual power rating exceeding 1.5KVA for auxiliary services;

(iii) aircraft in which the main generation system output is "frequency wild" alternating current (ac) and dc power is supplied from Transformer Rectifier Units; and

(iv) aircraft in which the main generation system output is constant speed drive units or variable speed constant frequency (VSCF) generator or converter systems and direct current (dc) power is supplied from transformer rectifier units;

(f) Category "X" – Instruments—

(i) general aircraft instrument systems but excluding instruments installed on any aircraft which has installed a Flight Director System;

(ii) flight Director Systems with air driven gyroscopes (attitudes);

(iii) flight Director Systems with electrical driven gyroscopes (attitudes);

(g) Category "X" –Automatic Pilots (Aeroplanes) —

(i) Non-Radio-Coupled Automatic Pilots;

(ii) Radio-Coupled Automatic Pilots;

(h) Category "X" –Automatic Pilots (Rotorcraft)—

(i) Non Radio-Coupled Automatic Pilots;

(ii) Radio-Coupled Automatic Pilots;

(i) Category "X" – Compass: Compass compensation and adjustment;

(j) Category "R" – Radio—

(i) airborne communication and airborne navigation systems;

(ii) airborne radar systems.

(k) The aircraft of which type or group rating is sought shall be of a type enlisted on State civil register;

(l) For an applicant to qualify for a group rating he or she shall have more than two categories endorsed on the licence.

6. Authorisations issued.

(1) The Authority may issue the following authorisations under these Regulations—

(a) category II operations;
(b) category III operations;
(c) flight examiner;
(d) flight engineer Instructor;
(e) type rating instructor;
(f) cabin crewmember instructor;
(g) medical examiner; and
(h) aviation repair specialist (ARS); and
(i) non-passenger carrying flights.

(2) The Authority may issue the following classes for aviation repair specialists authorisation—

(a) propellers;
(b) computer;
(c) instrument;
(d) accessory;
(e) component;
(f) welding;
(g) non-destructive testing; and
(h) any other authorisation as determined by the Authority.

7. English language proficiency.

(1) A holder of a pilot licence, air traffic controller licence, flight engineer licence, flight radiotelephone operator licence shall demonstrate the ability to speak and understand English language to the level specified in the language proficiency requirements prescribed in the Third Schedule to these Regulations.

(2) The licensed personnel specified in sub-regulation (1) who demonstrate proficiency below the Expert Level (Level 6) shall be formally re-evaluated at intervals in accordance with an individual's demonstrated proficiency level as follows—

(a) those demonstrating language proficiency at the Operational Level (Level 4) shall be re-evaluated once every three years; and

(b) those demonstrating language proficiency at the Extended Level (Level 5) shall be re-evaluated once every six years.

8. Duration of licences, certificates, ratings and authorisations.

(1) The Authority shall issue licences with a specific expiry date except as specifically provided by these Regulations.

(2) Except for an aviation repair specialist authorisation, all authorisations and ratings issued under these Regulations shall be valid for the term issued by the Authority but in any case not more than twelve months.

(3) An aviation repair specialist authorisation issued on the basis of employment with a specified employer, shall be valid for the term of employment of the aviation repair specialist with that employer.

(4) A Student Pilot Licence (SPL) shall be valid—

(a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twenty four months validity of the holder's medical certificate; or

(b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twelve months validity of the holder's medical certificate.

(5) A Private Pilot Licence (PPL) with an aeroplane or rotorcraft or glider category rating shall be valid—

(a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twenty four months validity of the holder's medical certificate; or

(b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the authority for a period of the remainder of the twelve months validity of the holder's medical certificate.

(6) A Commercial Pilot Licence (CPL) with an aeroplane or rotorcraft category rating shall be valid—

(a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority for a period of the remainder of the twelve months validity of the holder's medical certificate; or

(b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the Authority for a period of the remainder of the six months' validity of the holder's medical certificate.

(7) An Airline Transport Pilot Licence (ATPL) with an aeroplane or rotorcraft category rating shall be valid—

(a) for a holder who is less than forty years of age, from the date the licence is issued or renewed by the Authority, for a period of the remainder of the twelve months' validity of the holder's medical certificate; or

(b) for a holder who is forty years of age or more, from the date the licence is issued or renewed by the Authority for a period of the remainder of the six months' validity of the holder's medical certificate.

(8) An instrument rating is valid for a period of twelve months from the date of the initial or renewal flight test.

(9) A night rating is valid for a period of twelve months from the date of the initial issue or renewal of the rating.

(10) A Flight Engineer Licence is valid from the date the licence is issued or renewed by the Authority for a period of the remainder of the twelve month validity of the holder's medical certificate.

(11) A Flight Radio Telephony Operator Licence is valid for a period of twenty four months from the date of issue or renewal.

(12) A Flight Operation Officer Licence is valid for a period of twenty four months from the date of issue or renewal.

(13) A Cabin Crewmember Certificate is valid for twelve months from the date of issue or renewal.

(14) Aircraft Maintenance Engineer Licence is valid for a period of twenty four months from the date of issue or renewal.

(15) A Flight Instructor Rating is valid for a period of twelve months from the date of the instructor flight test or renewal.

(16) A Ground Instructor Licence is valid for a period of twenty four months from the date of issue or renewal.

(17) An Air Traffic Controller Licence shall, in the case of a holder who is—

(a) less than forty years of age, be valid from the date the licence is issued or renewed for a period of the remainder of forty eight months validity of the holder's Medical Certificate; or

(b) more than forty years of age, be valid from the date the licence is issued or renewed for a period of the remainder of twenty four months validity of the holder's Medical Certificate.

9. Validity of licences.

(1) A holder of a licence shall not exercise the privileges granted by that licence or by related ratings, unless the holder maintains competency and meets the requirements for recent experience established by the Authority.

(2) The Authority shall ensure that other contracting States are able to confirm the validity of the licence.

(3) The maintenance of competency of flight crew members engaged in commercial air transport operations may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with these Regulations.

(4) Maintenance of competency may be satisfactorily recorded in the operator's records and in the flight crew member's personal logbook.

(5) A flight crew member may, in lieu of maintaining competency in an aircraft, demonstrate continuing competency in synthetic flight training devices approved by the Authority.

(6) A report of medical fitness obtained in accordance with these Regulations shall be submitted to the Authority at intervals of not more than—

(a) twenty four months for the Private Pilot Licence (PPL) for aeroplane;

(b) twenty four months for the PPL for helicopter or gyroplane;

(c) twenty four months for the PPL for airship or balloon;

(d) twenty four months for the PPL for glider;

(e) twelve months for the Commercial Pilot Licence (CPL) for aeroplane;

(f) twelve months for the CPL for helicopter or gyroplane;

(g) twelve months for the CPL for airship or balloon;

(h) twelve months for the Airline Transport Pilot Licence (ATPL) for aeroplane;

(i) twelve months for the Multi-crew Pilot Licence (MPL) for aeroplane;

(j) twelve months for the ATPL for helicopter;

(k) twelve months for the flight engineer licence;

(l) twenty four months for the air traffic controller licence; and

(m) twelve months for the cabin crew certificate.

(7) When a holder of ATPL for aeroplane and helicopter has passed his or her 40th birthday, the twelve-month interval period specified in sub-regulation (6) shall be reduced to six months.

(8) When the holders have passed their fortieth birthday, the twenty four month interval specified in sub-regulation (6) for the PPL-aeroplane, helicopter, gyroplane, glider, airship, balloon and air traffic controller licence shall be reduced to twelve months and the twelve month interval specified in sub-regulation (6) for the CPL: aeroplane, helicopter, gyroplane, airship and balloon shall be reduced to six months.

(9)A licence or certificate issued by the Authority shall not be valid unless the holder of the licence or certificate has signed his name on the licence or certificate in ink with the holder's ordinary signature.

(10) When a holder of an Airline Transport Pilot Licence for aeroplane, helicopter and power-lift, commercial pilot licences for areoplane, airship, helicopter and powered-lift and multi-crew pilot licences for areoplane who is engaged in a commercial air transport operation, has passed his or her 60th birthday, the period of validity specified in regulation 9(6) shall be reduced to six months.

(11) When a holder of airline transport licence for areoplane, airship, helicopter and powered-lift, who is engaged in a single-crew commercial air transport operation carrying passengers, have reached their 40th birthday, the period of validity specified in subregulation (6) shall be reduced to six months.

(12) When the holder of PPL for areoplane, airship, helicopter and powered-lift or a holder of a free balloon pilot licence has attained his or her 40th birthday, the period of validity specified in sub regulation (6) shall be further reduced to twelve months.

10. Decrease in medical fitness.

(1) A holder of licence provided for in these Regulations shall not exercise the privileges of his or her licence and related ratings at any time when the holder is aware of any decrease in his or her medical fitness which might render the holder unable to safely and properly exercise these privileges.

(2) A licence holder shall inform the Authority of confirmed pregnancy or any decrease in medical fitness of duration of more than 20 days or which requires continued treatment with prescribed medication or which requires hospital treatment.

(3) The Authority shall suspend the medical certificate of a licence holder during any period in which the Authority becomes aware that the licence holder's medical fitness has, from any cause, decreased to an extent that would have prevented the issue or renewal of the licence holder's medical certificate.

(4) The suspension referred to in sub-regulation (3) shall continue until the end of the period of the decrease in medical fitness or until the expiration of the medical certificate, whichever comes first.

(5) A licence holder shall not exercise the privileges of his or her licence and related ratings during any period in which the holder's medical fitness has, from any cause, decreased to an extent that would have prevented the issue or renewal of the licence holder's medical certificate.

11. Deferral of medical examination.

(1) The prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Authority, provided that such deferment shall only be made as an exception and shall not exceed—

(a) a single period of six months in the case of a flight crewmember of an aircraft engaged in non-commercial operations;

(b) two consecutive periods each of three months in the case of a flight crewmember of an aircraft engaged in commercial operations, provided that in each case, a favourable medical report is obtained after examination by a medical examiner designated by the contracting State in which the applicant is situated; or

(c) in the case of a private pilot, a single period not exceeding twelve months where the medical examination is carried out by an examiner designated by the Contracting State in which the applicant is situated.

(2) For a deferral granted under sub-regulation (1) (b) and (c), a report of the medical examination shall be sent to the Authority for the licence to be renewed.

12. Extension of validity of medical certificate.

The period of validity of a medical certificate may be extended at the discretion of the Authority, up to 45 days.

13. Curtailment of privileges of pilots.

(1) Subject to sub-regulations (2) and (3), a person shall not act as a pilot in command (PIC) of an aircraft engaged in international commercial air transport operations if that person has attained his or her 60th birthday.

(2) A person shall not act as a PIC or co-pilot of a multi-crew aircraft engaged in international commercial air transport operations when he has attained his or her 65th birthday and the other pilot has attained his or her 60th birthday.

(3) A person shall not act as a PIC or co-pilot of an aircraft of maximum certificated take-off mass of over 5,700 kg, engaged in commercial air transport operations within Uganda if that person has attained his or her 65th birthday.

(4) A holder of a pilot licence who has attained the age of 65 years shall not act as a pilot of an aircraft engaged in commercial air transport operations.

(5)A holder of a pilot licence who has attained the age of 65 years shall operate only under the privileges of a Private Pilot Licence (PPL).

PART III—VALIDATION AND CONVERSION OF FOREIGN FLIGHT CREW LICENCES AND RECOGNITION OF MILITARY QUALIFICATIONS.

14. Validation of licences and ratings issued on the basis of a foreign pilot or Flight Engineer licence.

(1) A person who holds a current pilot licence or flight engineer licence issued by another Contracting State may apply for and may be issued a validation certificate with the appropriate ratings, if the applicant—

(a) is not under an order of revocation or suspension by the country that issued the licence;

(b) holds a licence that does not contain an endorsement stating that the applicant has not met all of the standards of ICAO for that licence;

(c) does not currently hold a pilot licence issued by the Authority;

(d) holds a current Medical Certificate issued by the Contracting State that issued the licence;

(e) demonstrates the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Second Schedule to these Regulations;

(f) passes air law, flight rules and procedures knowledge examinations;

(g) provides a letter of introduction from an approved training organisation; and

(h) holds a valid passport issued by a contracting State.

(2) The Authority may not place upon a certificate of validation privileges beyond those granted by a foreign licence.

(3) A person who receives a certificate of validation under this regulation shall—

(a) be limited to the privileges placed on the certificate;

(b) be subject to the limitations and restrictions on the certificate and foreign licence when exercising the privileges of that certificate in an aircraft registered in Uganda; and

(c) not exercise the privileges of the certificate when the person's foreign licence has been revoked or suspended.

(4) An applicant for a certificate of validation shall use only one foreign licence as a basis for obtaining a certificate of validation.

(5) The Authority may issue a validation certificate which may be valid for a maximum period of three months, provided the foreign licences, ratings and the medical certificate remains valid.

(6) The Authority shall place upon a certificate of validation the foreign licence number and country of issue.

(7) The Authority may render valid a licence issued by another contracting State for use in private flights subject to passing a flight check out on the relevant class rating.

(8) Subject to sub regulation (2), the certificate of validation issued by the Authority shall be valid for a maximum period of three months in the case of operations conducted by an Air Operator Certificate holder.

(9) The Authority shall verify the authenticity of the foreign pilot licence or flight engineer licence and any ratings listed on those certificates before issuing a validation certificate or any ratings on such validation certificate.

15. Recognition of military or former military flight crew qualifications.

(1) Except for a rated military or former military pilot or flight engineer who has been removed from flying status for lack of proficiency or because of disciplinary action involving aircraft operations, a rated military or former military pilot or flight engineer who meets the requirements of this regulation may apply, on the basis of the pilot's or flight engineer's military training, for—

(a) Private Pilot Licence (PPL), Commercial Pilot Licence (CPL) or Flight Engineer Licence;

(b) an aircraft rating in the category and class of aircraft for which the military pilot or flight engineer is qualified;

(c) an instrument rating with the appropriate aircraft rating for which that military pilot is qualified; and

(d) a type rating, if appropriate.

(2) Subject to regulations 16 and 18, the Authority may issue to a rated military or former military pilot or flight engineer an aircraft category, class, or type rating to a flight crew if that flight crew presents documentary evidence that shows satisfactory accomplishment of—

(a) instrument proficiency check of Uganda in the aircraft type he or she is rated within twelve months preceding the date of application;

(b) at least ten hours of pilot in command time in that aircraft category, class, or type, if applicable, within the twelve months preceding the date of application;

(c) a military flight engineer proficiency check in the aircraft type the flight engineer is rated within twelve months preceding the date of application; and

(d) at least ten hours of flight time in the aircraft type the flight engineer is rated within twelve months preceding the date of application.

(3) A rated military pilot or former rated military pilot may apply for an aeroplane or helicopter instrument rating to be added to the pilot's CPL if the pilot has, within the twelve month preceding the date of application—

(a) passed an instrument proficiency check by the military in the aircraft category and class for the instrument rating sought; and

(b) received authorisation from the military to conduct instrument flight rules (IFR) flights on airways in that aircraft category and class for the instrument rating sought.

(4) The Authority shall issue an aircraft type rating only for aircraft types that the Authority has certified for civil operations and are registered in Uganda.

(5) The Authority may accept the following documents as satisfactory evidence of military pilot or flight engineer status—

(a) an official identification card issued to the pilot or flight engineer by a military force to demonstrate service in the military;

(b) an original or a copy of a certificate of discharge or release from the military;

(c) at least one of the following—

(i) an order of military flight status as a military pilot or flight engineer; or

(ii) an order showing that the applicant graduated from a pilot or flight engineer school and received a rating as a military pilot or flight engineer.

(d) a certified military logbook or form showing military pilot and flight engineer status and a summary to demonstrate flight time in military aircraft;

(e) an official record of a military designation as pilot in command; or

(f) an official record of satisfactory accomplishment of an instrument proficiency check within the twelve months before the date of the application.

16. Conversion of Uganda Military Pilots' Qualification.

(1) A person who holds a current Uganda Military Pilot Category A, B, C and D qualification may apply to the Authority and be issued with a Uganda Private Pilot Licence (PPL) or Commercial Pilot Licence (CPL) with the appropriate ratings, if that person—

(a) has a licence which is not under an order of revocation or suspension;

(b) meets the minimum flying experience under these Regulations;

(c) holds a valid medical certificate issued by Uganda Military; and

(d) demonstrates the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations.

(2) An applicant for a pilot licence under this regulation shall submit to the Authority his or her personal military flying log book or any other equivalent document that is certified by the Base Commander.

(3) The applicant shall be required by the Authority to meet the applicable aeronautical experience requirements for the licence or rating sought.

(4) In addition to the requirements of sub-regulations (1), (2) and (3) the applicant shall be required to pass-

(a) for CPL—

(i) an examination for the Class 1 Medical Certificate;

(ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, navigation, flight performance, planning and loading, human performance, operational procedures, principles of flight and radiotelephony; and

(iii) the initial instrument rating flight test if the rating is to be included in the licence.

(b) for PPL—

(i) an examination for the Class 2 Medical Certificate;

(ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight performance, planning and loading,navigation, human performance, operational procedures, and radiotelephony.

(5) An applicant for a CPL shall not be eligible for grant of a licence unless there is included in the aircraft rating for either pilot-in-command or co-pilot respectively.

(6) The Authority may consider a military type rating qualification for the purpose of conversion of CPL if—

(a) the aircraft type is endorsed and certified in the applicants military personal logbook;

(b) the pilot is current on the aircraft type; and

(c) the type of aircraft is registered in Uganda.

(7) An applicant for conversion who fails the knowledge test in three consecutive attempts shall be disqualified from further testing until a period of one month has elapsed from the date on which the last test was made.

(8) The Authority shall prescribe the minimum passing grade for the knowledge test.

(9) The applicant shall be required to have passed the composite paper for conversion of a Uganda military pilot qualification within a period of six months preceding the date of the application for the licence.

17. Conversion of foreign pilot licence.

(1) A person who holds a current pilot licence issued by another contracting State may apply for and be issued an equivalent licence with the appropriate ratings, if the applicant—

(a) has a licence which is not under an order of revocation or suspension by the country that issued the licence;

(b) meets all the ICAO standards for that licence;

(c) holds a valid Medical Certificate issued by the contracting State that issued the licence; and

(d) demonstrates the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations.

(2) An applicant for a pilot licence under this regulation shall submit to the Authority his or her licence and medical certificate in the English language or accompanied by an English language translation that has been signed by an official or representative of the foreign authority that issued the licence.

(3) The applicant shall be required by the Authority to meet the applicable aeronautical experience requirements.

(4) In addition to the requirements of sub-regulations (1), (2) and (3), the applicant is required to pass—

(a) for Airline Air Transport Licence (ATPL) or Multi-crew Pilot Licence (MPL);

(i) the Class I Medical Certificate;

(ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony knowledge; and

(iii) an initial instrument rating flight test;

(b) for Commercial Pilot Licence (CPL)—

(i) an examination for the Class 1 Medical Certificate;

(ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony knowledge; and

(iii) the initial instrument rating flight test if the rating is to be included in the licence;

(c) for Private Pilot Licence (PPL)—

(i) an examination for the Class 2 Medical Certificate;

(ii) the composite paper comprising of air law, meteorology, aircraft general knowledge, flight planning, radio aids, navigation, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony knowledge;

(d) for lighter-than-air: as in (b) or (c) as appropriate except for Medical Certificate where in this case it is Class 2.

(5) An applicant for a CPL or ATPL or MPL shall not be eligible for grant of a licence unless there is included in the licence an aircraft type rating for either pilot-in-command or co-pilot respectively.

(6) The Authority may transfer a type rating from a foreign licence for the purpose of conversion of CPL or ATPL or MPL provided—

(a) the aircraft type is endorsed on a foreign licence;

(b) the pilot is current on the aircraft type; and

(c) the type of aircraft is registered in Uganda.

(7) An applicant for conversion who fails the knowledge test in three consecutive attempts shall be disqualified for further testing until a period of one month has elapsed from the date on which the last test was taken.

(8) The Authority shall prescribe the minimum passing grade for the knowledge test.

(9) The applicant shall be required by the Authority to pass the composite paper for conversion of a foreign licence within a period of six months preceding the date of the application for the licence.

(10) The Authority shall verify the authenticity of the foreign licence, ratings and authorisations presented for conversion with the state of issuance.

18. Conversion of flight engineer licence.

(1) A person who holds a current flight engineer licence issued by another Contracting State may apply to the Authority and be issued with an equivalent licence with the appropriate ratings, if that person—

(a) has a licence which is not under an order of revocation or suspension by the country that issued the licence;

(b) holds a licence which meets all the ICAO standards for that licence;

(c) holds a valid Medical Certificate Class 1 issued by the Contracting State that issued the licence; and

(d) demonstrates the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the First Schedule to these Regulations.

(2) An applicant for a flight engineer licence under this regulation shall submit the licence and Medical Certificate in the English language or accompanied by an English language translation that has been signed by an official or representative of the foreign authority that issued that licence.

(3) The applicant shall meet the applicable aeronautical experience requirements.

(4) In addition to the requirements of sub-regulations (1), (2) and (3), the applicant shall be required to pass—

(a) an examination for the Medical Certificate Class 1; and

(b) the composite paper comprising of Uganda air law, meteorology, aircraft general knowledge, flight performance and planning, human performance, operational procedures, principles of flight and radiotelephony.

(5) The Authority may transfer a type rating from a foreign licence for the purpose of conversion of flight engineer licence if—

(a) the aircraft type is endorsed on a foreign licence;

(b) the flight engineer is current on the aircraft type; and

(c) the type of aircraft is registered in Uganda.

(6) The applicant for conversion who fails the knowledge test in three consecutive attempts shall be disqualified for further testing until a period of one month has elapsed from the date on which the last test was made.

(7) The Authority shall prescribe the minimum passing grade for the knowledge test.

(8) The applicant shall be required to have passed the composite paper for conversion of a foreign licence within a period of six months preceding the date of the application for the licence.

(9) The Authority shall verify the authenticity of the foreign licence, ratings and authorisations presented for conversion with the State of issuance.

PART IV—VALIDATION, CONVERSION OF FOREIGN AIRCRAFT MAINTENANCE ENGINEER LICENCES AND RATINGS AND RECOGNITION OF ENGINEER MILITARY QUALIFICATIONS.

19. Validation of Aircraft Maintenance Engineer Licence (AMEL). (1) A person who holds a current and valid Aircraft Maintenance Engineer Licence (AMEL) issued by another contracting State may apply for and may be issued a certificate of validation with the appropriate rating if the applicant—

(a) holds a licence which is not under an order of revocation or suspension by the country that issued the licence;

(b) holds a licence that does not contain an endorsement stating that the applicant has not met all of the standards of ICAO for that licence;

(c) does not currently hold a licence issued by the Authority; and

(d) demonstrates the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule.

(2) The Authority may place upon a certificate of validation privileges not beyond those granted by a foreign licence.

(3) A person who receives a certificate of validation under this regulation shall—

(a) be limited to the privileges placed on the certificate;

(b) be subject to the limitations and restrictions on the certificate and the foreign AMEL when exercising the privileges of that certificate on an aircraft registered in Uganda; and

(c) not exercise the privileges of the certificate when the person's foreign licence has been revoked or suspended.

(4) An applicant for a certificate of validation shall present to the Authority the foreign licence and evidence of the experience required by presenting a valid record.

(5) The certificate of validation shall be valid for a maximum of 6 months, provided the foreign licence or in the case of a continuing licence, the rating remains valid.

(6) An applicant for a certificate of validation shall—

(a) complete a skill test for the relevant ratings in the licence to be validated, relevant to the privileges of the licence held;

(b) demonstrate to the satisfaction of the Authority the knowledge, relevant to the licence to be validated, of air law; and

(c) demonstrate to the satisfaction of the Authority the knowledge, relevant to the licence to be validated of—

(i) relevant aircraft maintenance principles; and

(ii) human performance.

(7) The Authority shall verify the authenticity of the foreign licence, ratings and authorisations presented for validation with the state of issuance.

20. Conversion of foreign Aircraft Maintenance Engineer Licence (AMEL).

(1) A person who holds a current Aircraft Maintenance Engineer Licence (AMEL) issued by another Contracting State may apply to the Authority for and be issued an equivalent licence with the appropriate ratings, if the applicant—

(a) has a licence which is not under an order of revocation or suspension by the country that issued the licence;

(b) holds a licence which meets all the ICAO standards for that licence.

(2) An applicant for an AMEL shall submit the licence in the English language or accompanied by an English language translation that is signed by an official or representative of the foreign authority that issued the licence.

(3) The applicant shall be required by the Authority to meet the applicable aeronautical experience requirements specified under these Regulations.

(4) In addition to the requirements of sub-regulations (1), (2) and (3) the applicant shall be required by the Authority to pass a knowledge test in —

(a) air law; and

(b) a composite paper comprising of subjects required for initial issue of a category and rating sought.

(c) applicable Airworthiness requirements governing certification and continuing airworthiness; and

(d) approved maintenance organisations and procedures; and

(e) human factor.

(5) The Authority may transfer a type rating from a foreign licence for the purpose of conversion of AMEL if—

(a) the aircraft type is endorsed on a foreign licence;

(b) that applicant is current on the aircraft type; and

(c) the type of aircraft is registered in Uganda.

(6) An applicant for conversion who fails the knowledge test shall be disqualified for further testing until after a proven practical experience of one month is gained.

(7) The Authority shall prescribe the minimum passing grade for the knowledge test.

(8) The applicant shall be required by the Authority to pass the air law and composite paper for conversion of a foreign licence within a period of six months preceding the date of the application for the licence.

(9)The Authority shall verify the authenticity of the foreign licence, ratings and authorisations presented for conversion with the state of issue.

21. Recognition of military aircraft maintenance personnel qualifications.

(1) A military aircraft maintenance personnel may apply to the Authority for issue of Aircraft Maintenance Engineer Licence (AMEL) without type rating on the basis of his or her military qualifications.

(2) The application shall be accompanied by—

(a) a certificate of discharge from military service;

(b) evidence of experience of six years in aircraft maintenance of which six months of recency experience must have been acquired within the twelve months preceding the application; and

(c) a certificate, diploma or such other document showing proof of training in aircraft maintenance.

(3) If the Authority is satisfied that the applicant meets the conditions in sub-regulations (2), the Authority shall require the applicant to demonstrate the knowledge and skill requirements for AMEL stipulated in these Regulations.

PART V—GENERAL REQUIREMENTS TESTING AND TRAINING FOR PILOT LICENCES, RATINGS AND AUTHORISATIONS.

22. Knowledge test prerequisites and passing grades.

(1) An applicant for a knowledge test shall—

(a) receive an endorsement from an authorised instructor certifying that the applicant has accomplished a ground-training required by these Regulations for the licence or rating sought and is prepared for the knowledge test; and

(b) present proper identification at the time of taking the test that includes the applicant's—

(i) photograph;

(ii) name;

(iii) signature;

(iv) date of birth, which shows that the applicant meets or will meet the age requirements of these Regulations for the licence sought before the expiry date of the applicant's knowledge test report; and

(v) mailing address.

(2) The Authority shall specify the minimum passing grade for the knowledge test.

(3) The validity of the knowledge test results for an applicant for a pilot licence shall be as follows—

(a) for Private Pilot Licence (PPL) - six months after passing the test;

(b) for Commercial Pilot Licence (CPL) - eighteen months after passing the test; and

(c) for Airline Transport Pilot licence (ATPL) - five years after passing the test;

(d) for Multi-crew Pilot Licence (MPL) – five years after passing the test.

23. Practical tests: prerequistes for flight crew.

(1) An applicant shall be required by the Authrotiy to meet all applicable requirements for the licence or rating sought in order to be eligible for a practical test.

(2) If an applicant for a practical test does not—

(a) complete all increments of a practical test for a licence or rating in one day, that applicant shall complete all remaining increments of the test not more than sixty days after that date; and

(b) satisfactorily complete all increments of the practical test for a licence or a rating within sixty days after beginning the test, that applicant shall retake the entire practical test, including those increments satisfactorily completed.

(3) Except as provided in sub-regulation (4), to be eligible for a practical test for a licence or rating issued under these Regulations, an applicant for a practical test shall meet the following requirements –

(a) pass the required knowledge test for the type rating within six months preceding the month the applicant completes the practical test;

(b) present the knowledge test report at the time of application for the practical test, if a knowledge test is required;

(c) satisfactorily accomplish the required training and obtain the aeronautical experience prescribed by these Regulations for the licence or rating sought;

(d) meet the prescribed age requirement of these Regulations for the issue of the licence or rating sought; and

(e) have an endorsement in the applicant's logbook or training record that has been signed by an authorised instructor who certifies that the applicant—

(i) has received and logged training time within sixty days preceding the date of application in preparation for the practical test;

(ii) is prepared for the required practical test; and

(iii) has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient on the knowledge test.

(4) An applicant for an Airline Transport Pilot Licence may take the practical test for that licence within two years of the expiration of a knowledge test, provided the applicant—

(a) has been continuously employed as a flight crew member by an Air Operator Certificate (AOC) holder from the time the knowledge test expired; and

(b) has satisfactorily accomplished that AOC holder's approved—

(i) pilot-in-command aircraft qualification training programme that is appropriate to the licence; and

(ii) qualification training requirements appropriate to the licence and rating sought.

24. Practical tests: general requirements for flight crew.

(1) The ability of an applicant for a practical test to hold a pilot licence or rating shall be determined based on the applicant's ability to demonstrate, during a practical test—

(a) performance of the tasks specified in the areas of operation for the licence or rating sought within the prescribed standards;

(b) mastery of the aircraft with the successful outcome of each task regarding—

(i) Private Pilot Licence and Commercial Pilot Licence licence tests; and

(ii) Airline Transport Pilot Licence and aircraft type rating tests;

(c) sound judgement; and

(d) a single-pilot competence if the aircraft is type certified for single-pilot operations.

(2) An applicant who fails in any area of operation shall be considered to have failed the practical test and shall not be eligible for the licence or rating sought.

(3) The examiner or the applicant may discontinue a practical test at any time—

(a) when the applicant fails one or more areas of operation; or

(b) due to inclement weather conditions, aircraft airworthiness concerns or any other safety-of-flight concern.

(4) If a practical test is discontinued, the Authority may give the applicant credit for those areas of operation already passed, but only if the applicant—

(a) passes the remainder of the practical test within the sixty-day period after the date the practical test was begun;

(b) presents to the examiner for the re-test the original test report or the discontinuance form prescribed by the Authority as appropriate; and

(c) satisfactorily accomplishes any additional training needed and obtains the appropriate instructor endorsements, if additional training is required.

(5) The validity of the practical test results for applicants for a pilot licence and type rating shall be six months after passing the test.

25. Practical tests: required aircraft and equipment.

(1) An applicant for a licence or rating issued under these Regulations shall, except when permitted to accomplish the entire flight increment of the practical test in an approved synthetic flight trainer, provide an aircraft registered in Uganda for each required test that—

(a) is of the category, class, and type, if applicable to the licence or rating sought; and

(b) has a certificate of airworthiness.

(2) An applicant for a practical test shall use an aircraft that has—

(a) the equipment for each area of operation required for the practical test;

(b) no prescribed operating limitations that prohibit the aircraft's use in any of the areas of operation required for the practical test;

(c) except as provided in sub-regulation (5), at least two pilot stations with adequate visibility for each person to operate the aircraft safely; and

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

(3) An applicant for a practical test shall use an aircraft, other than a lighter-than-air aircraft, that has engine power controls and flight controls that are easily reached and able to be operated in a conventional manner by both pilots, unless the examiner determines that the practical test can be conducted safely in the aircraft without the controls being easily reached.

(4) An applicant for a practical test that involves manoeuvring an aircraft solely by reference to instruments shall provide an aircraft with—

(a) an equipment that permits the applicant to pass the areas of operation that apply to the rating sought; and

(b) a device that prevents the applicant from having visual reference outside the aircraft, but does not prevent the examiner from having visual reference outside the aircraft, and is otherwise acceptable to the Authority.

(5) An applicant may complete a practical test in an aircraft having a single set of controls, if—

(a) the examiner agrees to conduct the test;

(b) the test does not involve a demonstration of instrument skills; and

(c) the proficiency of the applicant can be observed by an examiner who is in a position to observe the applicant.

26. Retesting after failure.

(1) An applicant for a knowledge or practical test who fails that test may reapply for the test only after the applicant has received—

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

(b) an endorsement from an authorised instructor who gave the applicant the additional training.

(2) An applicant for a flight instructor licence with an aeroplane category rating or for a flight instructor licence with a glider category rating, who has failed the practical test due to deficiencies in instructional proficiency on stall awareness, spin entry, spins or spin recovery shall—

(a) comply with the requirements of sub-regulation (1) before being retested;

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

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

27. Records of training time.

(1) A person shall document and record the following time in a manner acceptable to the Authority—

(a) training and aeronautical experience used to meet the requirements for a licence, rating, qualification, or authorisation of these Regulations; and

(b) the aeronautical experience required to show recent flight experience requirements of these Regulations.

(2) For the purposes of meeting the requirements of these Regulations, a person shall enter the following information for each flight or lesson logged—

(a) general—

(i) date;

(ii) total flight time;

(iii) location where the aircraft departed and arrived or for lessons in an approved synthetic flight trainer, the location where the lesson occurred;

(iv) type and identification of aircraft or approved synthetic flight trainer, as appropriate;

(v) the name of a safety pilot, if required by the Civil Aviation (Operation of Aircraft) Regulations, 2014; and

(vi) the name of the authorised instructor if required;

(b) type of pilot experience or training-

(i) solo;

(ii) pilot-in-command (PIC);

(iii) PIC under supervision (U/S);

(iv) co-pilot;

(v) flight and ground training received from an authorised instructor; and

(vi) training received in an approved synthetic flight trainer from an authorised instructor.

(c) conditions of flight—

(i) day or night;

(ii) actual instrument; and

(iii) simulated instrument conditions in flight or in an approved synthetic flight trainer.

(3) The pilot time described in this regulation may be used to—

(a) apply for a licence or rating issued under these Regulations; or

(b) satisfy the recent flight experience requirements of the Civil Aviation (Operation of Aircraft) Regulations, 2014.

(4) Except for a student pilot acting as PIC of an airship requiring more than one flight crew member, a pilot may log as solo flight time only that flight time when the pilot is the sole occupant of the aircraft.

(5) A private or commercial pilot may log PIC time only for that flight time during which that person is—

(a) the sole manipulator of the controls of an aircraft for which the pilot is rated; or

(b) acting as PIC of an aircraft on which more than one pilot is required; or

(c) a sole occupant.

(6) An airline transport pilot may log as PIC time all of the flight time while acting as PIC of an operation requiring an Airline Transport Pilot or Multi Crew Pilot Licences.

(7) An authorised instructor may log as PIC time all flight time while acting as an authorised instructor.

(8) A student pilot may log PIC time when that student pilot—

(a) is the sole occupant of the aircraft; and

(b) is undergoing training for a pilot licence or rating.

(9) A person may log co-pilot flight time only for that flight time during which that person -

(a) is qualified in accordance with the co-pilot requirements of the Civil Aviation (Operation of Aircraft) Regulations, 2014 and occupies a crew member station in an aircraft that requires more than one pilot by the aircraft's type certificate; or

(b) holds the appropriate category, class, and instrument rating if an instrument rating is required for the flight, for the aircraft being flown, and more than one pilot is required under the type certification of aircraft.

(10) A person may log instrument flight time only for that flight time when that person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.

(11) An authorised instructor may log instrument flight time when conducting instrument flight instruction in actual instrument flight conditions.

(12) For the purposes of logging instrument flight time to meet the recent instrument experience requirements of the Civil Aviation (Operation of Aircraft) Regulations, 2014 the following information shall be recorded in a person's logbook—

(i) the location and type of each instrument approach accomplished; and

(ii) the name of the safety pilot, if required.

(13) An approved synthetic flight trainer may be used by a person to log instrument flight time, provided an authorised instructor is present during the simulated flight.

(14) A person may log training time when that person receives training from an authorised instructor in an aircraft or in an approved synthetic flight trainer.

(15) The training time shall be logged in a logbook and shall -

(a) be endorsed in a legible manner by the authorised instructor; and

(b) include a description of the training given, the length of the training lesson and the instructor's signature, licence number and licence expiry date.

28. Limitations on the use of synthetic flight trainer.

A person shall not receive credit for use of any synthetic flight trainer for satisfying any training testing or checking requirement of this regulation unless the synthetic flight trainer is approved by the Authority for—

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

(b) each particular manoeuvre, procedure or crew member function performed; and

(c) the representation of the specific category and class of aircraft, type of aircraft, particular variation within the type of aircraft or set of aircraft for certain flight training devices.

29. Use of synthetic flight trainer for demonstrations of skill.

(1) The use of a synthetic flight trainer for performing any manoeuvre required during the demonstration of skill for the issue of a flight crew licence or rating shall be approved by Authority to ensure that the synthetic flight trainer used is appropriate to the task.

(2) To maintain the competence required by these Regulations, a flight crew member may demonstrate his or her skills during proficiency flight checks in a synthetic flight trainer approved under sub regulation (1).

30. General requirements for pilot licences, ratings and authorisations.

(1) The Authority shall issue to an applicant who is unable to comply with certain eligibility requirements or areas of operations required for the issue of a licence due to physical limitations or for other reasons, a licence, rating or authorisation with appropriate limitations for operations only within Uganda if—

(a) the applicant is able to meet all other certification requirements for the licence, rating, or authorisation sought;

(b) physical limitation, if any, has been recorded with the Authority on the applicant's medical records; and

(c) the Authority determines that the applicant's inability to perform the particular area of operation shall not adversely affect safety.

(2) The Authority may remove a limitation placed on a person's licence if that person demonstrates to an examiner or inspector satisfactory proficiency in the area of operation to which the limitation applies or otherwise shows compliance with conditions to remove the limitation, as applicable.

(3) A person shall not act as the pilot in command of an aircraft unless that person holds the appropriate category, class and type rating if a class rating, and type rating is required for the aircraft to be flown, except where the pilot is receiving training for the purpose of obtaining an additional pilot licence or rating while under the supervision of an authorised instructor.

(4) Subject to sub regulation (5), a person shall not act as a pilot of an aircraft that is carrying another person or is operated for compensation or hire, unless that pilot holds a category, class and type rating that applies to the aircraft.

(5) Sub-regulation (4) does not require a category and class rating for an aircraft not type certified as an aeroplane, rotorcraft, glider, or lighter-than-air aircraft.

(6) A person shall not act as PIC of a complex aircraft, high-performance aircraft or a pressurised aircraft capable of flying at 25,000 feet above mean sea level or an aircraft that the Authority has determined requires aircraft type specific training unless the person has –

(a) received and logged ground and flight training from an authorised instructor in the applicable aircraft type or in an approved synthetic flight trainer that is a representative of that aircraft and has been found by the authorised instructor to be proficient in the operation and systems of that aircraft; and

(b) received an endorsement in the pilot's logbook from an authorised instructor who certifies the person is proficient to operate that aircraft.

(7) A person shall not act as PIC of a tailwheel aeroplane unless that person has—

(a) received and logged flight training from an authorised instructor in a tailwheel aeroplane on the manoeuvres listed in paragraph (b); and

(b) received an endorsement in his or her logbook from an authorised instructor who is satisfied that the person is proficient in the operation of a tailwheel aeroplane, including at least normal and crosswind take offs and landings, wheel landings unless the manufacturer has recommended against such landings and go around procedures .

PART VI—PILOT LICENCES.

Student Pilot Licence

31. Eligibility requirements.

(1) A person shall possess a valid Student Pilot Licence (SPL) in order to be eligible to receive and log flight instructions.

(2) For an applicant to be eligible for the issue of SPL, he or she shall fulfil the following conditions—

(a) be at least seventeen years of age for a licence other than the operation of a glider, airship or balloon;

(b) be at least sixteen years of age for the operation of a glider balloon or airship;

(c) be able to demonstrate the ability to read, speak, write, and understand the English language; and

(d) be in possession of a valid Class 2 Medical Certificate issued under these Regulations.

32. Solo flight requirements.

(1) A holder of a Student Pilot Licence (SPL) shall not operate an aircraft in first solo flight unless that student has met the requirements of this regulation.

(2) A student pilot shall pass an aeronautical knowledge test on the following subjects—

(a) applicable sections of these Regulations and the Civil Aviation (Operation of Aircraft) Regulations, 2014;

(b) airspace structure and procedures for the airport where the student will perform solo flight; and

(c) flight characteristics and operational limitations for the make and model of aircraft to be flown.

(3) The student's authorised instructor shall—

(a) administer the test;

(b) review all incorrect answers with the student before authorising that student to conduct a solo flight.

(c) notify the air traffic services before the student commences the solo flight.

(4) A student pilot shall prior to conducting a solo flight—

(a) receive and log flight training for the manoeuvres and procedures of this regulation that are appropriate to the make and model of aircraft to be flown;

(b) demonstrate satisfactory proficiency and safety, as judged by an authorised instructor on the manoeuvres and procedures required by this regulation in the make and model of aircraft or similar make and model of aircraft to be flown; and

(c) be judged by an authorised instructor as being able to speak and understand the English language used for radiotelephony communications, but shall not be required to comply with the Holistic Descriptors of the Rating Scale.

(5) A student pilot who is preparing for solo flight shall receive training in English Language Proficiency and log flight training for the required manoeuvres and procedures, including the following as applicable, for each category and class rating—

(a) proper flight preparation procedures, including pre-flight planning and preparation, engine operation and aircraft systems;

(b) taxing or surface operations, including run-ups;

(c) take-offs and landings, including normal and crosswind;

(d) straight and level flight, and turns in both directions;

(e) climbs and climbing turns;

(f) airport traffic patterns;

(g) radio-telephony, airport entry and departure procedures;

(h) collision avoidance, windshear avoidance, and wake turbulence avoidance;

(i) descents, with and without turns, using high and low drag configurations;

(j) flight at various airspeeds from cruise to slow flight;

(k) stall entries from various flight altitudes and power combinations with recovery initiated at the first indication of a stall and recovery from a full stall;

(l) emergency procedures and equipment malfunctions;

(m) ground reference manoeuvres;

(n) approaches to a landing area with simulated engine malfunctions;

(o) slips to a landing; and

(p) go arounds.

(6) A holder of student pilot licence who is receiving training for solo flight shall receive and log flight training for the following additional manoeuvres and procedures, as applicable as indicated for each category and class rating—

(a) in a multi-engine aeroplane—

(i) proper flight preparation procedures, including pre-flight planning and preparation, powerplant operation, and aircraft systems;

(ii) taxiing or surface operations, including runups;

(iii) take-offs and landings, including normal and crosswind;

(iv) straight and level flight, and turns in both directions;

(v) climbs and climbing turns;

(vi) airport traffic patterns, including entry and departure procedures;

(vii) collision avoidance, windshear avoidance, and wake turbulence avoidance;

(viii) descents, with and without turns, using high and low drag configurations;

(ix) flight at various airspeeds from cruise to slow flight;

(x) stall entries from various flight attitudes and power combinations with recover initiated at the first indication of a stall and recovery from a full stall;

(xi) emergency procedures and equipment malfunctions;

(xii) ground reference manoeuvres;

(xiii) approaches to a landing area with simulated engine malfunctions; and

(xiv) go arounds.

(b) in a helicopter—

(i) approaches to the landing area;

(ii) hovering and hovering turns;

(iii) simulated emergency procedures including autorotational descents with a power recovery and power recovery to a hover;

(iv) rapid decelerations; and

(v) simulated oneengineinoperative approaches and landings for multi-engine helicopter.

(c) in a gyroplane—

(i) approaches to the landing area;

(ii) high rates of descent with power on and with simulated power off and recovery from those flight configurations; and

(iii) simulated emergency procedures, including simulated poweroff landings and simulated power failure during departures

(d) in a glider—

(i) the applicable manoeuvres and procedures shown in paragraph (a);

(ii) launches, including normal and crosswind;

(iii) inspection of towline rigging and review of signals and release procedures;

(iv) aero tow, ground tow or selflaunch procedures;

(v) procedures for disassembly and assembly of the glider;

(vi) slips to a landing;

(vii) procedures and techniques for thermalling; and

(viii) emergency operations, including towline break procedures.

(e) in an airship—

(i) rigging, ballasting and controlling pressure in the ballonets and superheating; and

(ii) landings with positive and with negative static trim;

(f) in a balloon—

(i) layout and assembly procedures;

(ii) ascents and descents;

(iii) landing and recovery procedures;

(iv) operation of hot air or gas source, ballast, valves, vents, and rip panels, as appropriate;

(v) use of deflation valves or rip panels for simulating an emergency;

(vi) the effects of wind on climb and approach angles; and

(vii) obstruction detection and avoidance techniques.

33. Privileges and limitations.

(1) A holder of a Student Pilot Licence shall be entitled to fly as a PIC of an aircraft for the purpose of becoming qualified for a grant or renewal of a Pilot's Licence.

(2) A holder of an Student Pilot Licence (SPL) shall not act as pilot in command (PIC) of an aircraft—

(a) that is carrying a passenger;

(b) that is carrying property for compensation or hire;

(c) that is operated for compensation or hire;

(d) in furtherance of a business;

(e) on an international flight;

(f) when the flight cannot be made under visual meteorological conditions (VMC) as specified under the Civil Aviation (Rules of the Air and Air Traffic Control) Regulations, 2014; or

(g) in a manner contrary to any limitations placed in the pilot's logbook by an authorised instructor.

(3) A holder of an SPL shall not act as a required flight crewmember on any aircraft for which more than one pilot is required by the aircraft type certificate or by these Regulations under which the flight is conducted, except when receiving flight training from an authorised instructor on board an airship and no person other than a required flight crewmember is carried on the airship.

(4) A holder of an SPL shall not operate an aircraft in solo flight unless that student pilot has received within the ninety days preceding the date of the flight an endorsement made in the student's logbook from an authorised instructor for the specific make and model of aircraft intended to be flown.

(5) A holder of an SPL shall not act as a PIC of an aircraft unless his or her logbook is endorsed by an authorised instructor to the effect that he or she is capable of communicating with air traffic control on radiotelephony.

34. Solo flight cross-country requirements.

(1) A holder of a Student Pilot Licence (SPL) shall, except as provided in sub-regulation (4), meet the requirements of this regulation prior to—

(a) conducting a solo cross-country flight or any flight greater than twenty five nautical miles from the airport from where the flight originated; or

(b) making a solo flight and landing at any location other than the airport of origin.

(2) Subject to sub-regulation (4), a student pilot who seeks solo cross-country flight privileges shall—

(a) receive flight training from an authorised instructor on the manoeuvres and procedures required by this regulation that are appropriate to the make and model of aircraft for which solo cross-country privileges are sought;

(b) demonstrate cross-country proficiency on the appropriate manoeuvres and procedures required by this regulation to an authorised instructor;

(c) satisfactorily accomplish the pre-solo flight manoeuvres and procedures required by this regulation in the make and model of aircraft or similar make and model of aircraft for which solo cross-country privileges are sought; and

(d) comply with any limitations included in the instructor's endorsement that are required by sub-regulation (5).

(3) A holder of an SPL who seeks solo cross-country flight privileges shall prior to obtaining the privileges receive ground and flight training from an authorised instructor on the cross-country manoeuvres and procedures listed in this regulation that are appropriate to the aircraft to be flown.

(4) A student pilot shall obtain an endorsement from an authorised instructor to make solo flights subject to the following conditions—

(a) the student pilot may make solo flights to another airport that is within twenty-five nautical miles from the airport where the student pilot normally receives training if—

(i) the authorised instructor who makes the endorsement has given the student pilot flight training at the other airport and that training included flight in both directions over the route, entering and exiting the traffic pattern and takeoffs and landings at the other airport;

(ii) the student pilot has a current solo flight endorsement in accordance with these Regulations;

(iii) the authorised instructor has determined that the student pilot is proficient to make the flight; and

(iv) the purpose of the flight is to practice takeoffs and landings at that other airport.

(b) the student pilot may make repeated specific solo cross-country flights to another airport that is within fifty nautical miles of the airport from which the flight originated, if—

(i) the authorised instructor who gave the endorsement gave the student flight training in both directions over the route, including entering and exiting the traffic patterns, takeoffs, and landings at the airport to be used;

(ii) the student has current solo flight endorsements in accordance with these Regulations; and

(iii) the student has a current solo cross-country flight endorsement in accordance with sub-regulation (5), except that separate endorsements are not required for each flight made under this regulation.

(5) Except as specified in sub-regulation (4)(b), a student pilot shall have a solo cross-country endorsement placed in the student pilot's log book by the authorised instructor who conducted the training for each make and model aircraft the student will fly on each cross-country flight.

(6) A student pilot who is receiving training for cross-country flight shall receive and log flight training in the following manoeuvres and procedures—

(a) in an aeroplane or rotorcraft—

(i) use of aeronautical charts for visual flight rules navigation using pilotage and dead reckoning with the aid of a magnetic compass;

(ii) use of aircraft performance charts pertaining to cross-country flight;

(iii) procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight;

(iv) recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight;

(v) use of radios for VFR navigation and two-way communications;

(vi) climbs at best angle and best rate; and

(vii) control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and air traffic control clearances;

(b) in a glider—

(i) the manouvres and procedure specified in sub-regulation (6)(a), as applicable;

(ii) landings accomplished without the use of the altimeter from at least two thousand feet above the surface; and

(iii) recognition of weather and upper air conditions favourable for cross-country soaring, ascending flight, descending flight, and altitude control;

(c) in an airship—

(i) he manoeuvres and procedures specified in sub-regulation (6)(a) as applicable;

(ii) control of air pressure with regard to ascending and descending flight and altitude control;

(iii) control of the airship solely by reference to flight instruments; and

(iv) recognition of weather and upper air conditions conducive for the direction of cross-country flight.

35. Renewal requirements.
A holder of an SPL may apply for renewal of the licence if the holder has passed a Class II medical examination.

Private Pilot Licence

36. Eligibility requirements.
An applicant for a Private Pilot Licence (PPL), shall—

(a) be at least seventeen years of age for a licence other than the operation of glider or balloon;

(b) be at least sixteen years of age for a licence in a glider or balloon;

(c) demonstrate the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations;

(d) complete the training approved by the Authority in accordance with the flight crew training course and training program—

(i) on the aeronautical knowledge areas listed in regulation 37, that apply to the aircraft category sought; and

(ii) certified that the person is prepared for the required knowledge test;

(e) possess a valid Class 2 Medical Certificate issued under these Regulations;

(f) pass the required knowledge test on the aeronautical knowledge areas listed in regulation 37;

(g) receive flight training and a logbook endorsement from an authorised instructor who—

(i) conducted the training in the areas of operation listed in regulation 38, that apply to the aircraft category and class rating sought; and

(ii) certified that the person is prepared for the required practical test;

(h) meet the aeronautical experience requirements of this sub-part that apply to the aircraft category and class rating sought before applying for the practical test;

(i) pass a practical test on the areas of operation listed in regulation 38 that apply to the aircraft category and class rating sought; and

(j) comply with the appropriate provisions of these Regulations that apply to the aircraft category and class rating sought.

37. Aeronautical knowledge requirements.

(1) An applicant for a private pilot licence shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of such licence and appropriate to the category of aircraft intended to be included in the licence in at least the following subjects—

(a) air law -
rules and regulations relevant to the holder of a PPL, rules of the air, altimeter setting procedures, appropriate air traffic service practices and procedures for aeroplane, helicopter, powered-lift and airship;

(b) aircraft general knowledge—

(i) principles of operation and functioning of powerplants, systems and instruments;

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

(iii) for helicopter and powered-lift transmission (power-trains) where applicable;

(iv) for airship, physical properties and application of gases;

(c) flight performance, planning and loading —

(i) effects of loading and mass distribution on flight characteristics mass and balance calculations;

(ii) use and practical application of take-off, landing and other performance data;

(iii) pre-flight and en-route flight planning appropriate to private operations under VFR, preparation and filing of air traffic services flight plans, appropriate air traffic services procedures, position reporting procedures, altimeter setting procedures, operations in areas of high-density traffic;

(d) human performance-
human performance including threats and error management;

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

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

(g) operational procedures—

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

(ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

(iii) application of threats and error management principles to operational performance;

(iv) altimeter setting procedures;

(v) in case of the helicopter, and if applicable, powered-lift, settling with power, ground resonance, retreating blade stall; dynamic roll-over and other operational hazards, safety procedures, associated with flight in VMC;

(vi) principles of flight;

(h) adiotelephony -
communication procedures and phraseology as applied to VFR operations and action to be taken in case of communication failure.

(3) The aeronautical knowledge areas applicable to any relevant rotorcraft category and class rating shall include all areas covered under sub-regulation (2) and settling with power, ground resonance, roll over and other operating hazards.

(4) The aeronautical knowledge areas applicable to any relevant lighter-than- air category and class rating shall be as follows—

(a) air law rules and regulations relevant to the holder of a lighter-than- air category, rules of the air, appropriate air traffic services practices and procedures;

(b) aircraft general knowledge—

(i) principles of operation of lighter-than-air aircraft category systems and instruments;

(ii) operating limitations of lighter-than-air aircraft category relevant operational information from the flight manual or other appropriate document;

(iii) physical properties and practical application of gases used in lighter than aircraft category.

(c) flight performance and planning-

(i) effects of loading on flight characteristics; mass and balance calculations;

(ii) use and practical application of launching, landing and other performance data, including the effect of temperature;

(iii) pre-flight and en-route flight planning appropriate to operations under VFR, appropriate air traffic services procedures, altimeter setting procedures and operations in areas of high-density traffic;

(d) human performance –
human performance relevant to the private pilot including principles of threat and error management;

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

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

(g) operational procedures—

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

(ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

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

(iv) altimeter setting procedures;

(v) safety procedures, associated with flight in VMC.

(h) principles of flight relating to lighter than aircraft category.

38. Flight instruction requirements.

An applicant for a Private Pilot Licence (PPL) shall receive and log ground and flight training from an authorised instructor on the following areas of operation—

(a) for all categories and class ratings, as applicable—

(i) pre-flight operation, including mass and balance determination, aeroplane inspection and servicing;

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

(iii) control of the aeroplane by external visual reference;

(iv) flight at critically slow airspeeds, recognition of and recovery from incipient and full stalls;

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

(vi) normal and cross-wind take-offs and landings;

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

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

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

(x) emergency operations, including simulated aeroplane equipment malfunctions; and

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

(xii) recognise and manage threats and errors.

(xiii) communication procedures and phraseology.

(b) for aeroplane category rating, with a multi engine class rating the areas covered in paragraph (a) and in addition the following requirements—

(i) emergency operations; including the applicant's knowledge and performance of the following tasks-

(aa) emergency descent;

(bb) engine failure during take-off before Vmc;

(cc) engine failure after lift-off (simulated);

(dd) approach and landing with an inoperative engine (simulated); and

(ii) multi-engine operations including the applicant's knowledge and performance of the following tasks –

(aa) manoeuvring with one engine inoperative;

(bb) Vmc demonstration; and

(cc) engine failure during flight (by reference to instruments).

(c) for rotorcraft category rating with a helicopter class rating the areas covered in paragraph (a) and in addition the following-

(i) control of the helicopter by external visual reference;

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

(iii) ground manoeuvring and run-ups, hovering, take-offs and landings — normal, out of wind and sloping ground;

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

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

(vii) emergency operations including simulated helicopter equipment malfunctions, autorotative approach and landing; and

(d) for rotorcraft category rating with a gyroplane class rating the areas covered in paragraph (a) and in addition flight at slow airspeeds;

(e) for glider category rating the following areas—

(i) pre-flight operations, including glider assembly and inspection;

(ii) techniques and procedures for the launching method used including appropriate airspeed limitations, emergency procedures and signals used;

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

(iv) control of the glider by external visual reference;

(v) flight throughout the flight envelope;

(vi) recognition of and recovery from, incipient and full stalls and spiral dives;

(vii) normal and cross-wind launches, approaches and landings;

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

(ix) emergency procedures.

(f) for lighter-than-air category and class rating the following areas—

(i) pre-flight operations including balloon assembly, rigging, inflation, mooring and inspection;

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

(iii) collision avoidance precautions;

(iv) control of a free balloon by external visual reference;

(v) recognition of and recovery from rapid descents;

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

(vii) approaches and landings including ground handling; and

(viii) emergency procedures.

(g) for powered-lifts category rating, operational experience in the following areas—

(i) recognise and manage threats and errors;

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

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

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

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

(vi) take-offs and landings with minimum necessary power;

(vii) maximum performance take-off and landing techniques;

(viii) restricted site operations; quick stops;

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

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

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

(xii) emergency operations including simulated powered-lift equipment malfunctions; power of reconversion to autorotation and autorotative approach, where applicable;

(xiii) transmission and interconnect driveshaft failure, where applicable;

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

(xv) communication procedures and phraseology.

39. Aeronautical experience requirements for Private Pilot Licence (PPL).

(1) An applicant for a Private Pilot Licence (PPL) with an aeroplane category rating shall complete —

(a) for a single engine class rating for each category rating sought—

(i) not less than 40 hours of flight time as pilot of aeroplanes, a total of 5 hours may have been completed in a synthetic flight trainer; and

(ii) not less than 10 hours of solo flight time under the supervision of an authorised flight instructor including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made;

(b) for a multi engine class rating for each category sought, in addition to the requirements of paragraph (a)—

(i) not less than 10 hours under the supervision of an authorised flight instructor in the category sought; and

(ii) pass a practical skill test on multi-engine aircraft as specified in regulation 24.

(2) An applicant for a Private Pilot Licence (PPL) with a rotorcraft category rating shall complete for a single engine rotorcraft type rating—

(a) not less than 40 hours of flight time or 35 hours if completed during a course of approved training as pilot of rotorcraft, a total of 5 hours may have been completed in a synthetic flight trainer; and

(b) not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

(3) An applicant for a PPL with glider category shall complete—

(a) not less than 6 hours of flight time as pilot of gliders including 2 hours solo flight time during which not less than 20 launches and landings have been performed; and

(b) if the applicant has logged forty hours of flight time in aeroplanes the applicant shall complete 3 hours of flight time in a glider including 2 hours of solo flight time during which not less than ten launches and landings have been performed.

(c) demonstrate the ability to perform as pilot-in command of a glider, the procedures and manoeuvres described in regulation 38 (e) with a degree of competency appropriate to the privileges granted to the holder of a glider pilot licence, and to—

(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.

(4) An applicant for a PPL with a balloon class rating shall have completed 16 hours which consists of not less than 8 training flights in the areas of operation that includes—

(a) where the training is performed in a gas balloon—

(i) two flights of two hours each that consists of one training flight within sixty days prior to application for the rating on the areas of operation for a gas balloon;

(ii) 5 hours of solo flight in a gas balloon under an authorised instructor; and

(iii) one flight involving a controlled ascent to three thousand feet above the launch site.

(b) where the training is performed in a balloon with an airborne heater—

(i) two flights of one hour each within sixty days prior to application for the rating on areas of operation appropriate to a balloon with an airborne heater;

(ii) five hours solo flight in a balloon with an airborne heater under an authorised instructor; and

(iii) one flight involving a controlled ascent to three thousand feet above the launch site.

(5)An applicant for a PPL with an airship class rating shall complete 25 hours of flight training in airships on the areas of operation which consists of at least-

(a) if the privileges of the licence are to be exercised at night, three hours of night flight training in an airship that includes—

(i) a cross-country flight of over twenty-five nautical miles total distance; and

(ii) five takeoffs and five landings to a full stop, with each landing involving a flight in the traffic pattern, at an airport; and

(b) 5 hours of solo flight in an airship with an authorised instructor.

(6) An applicant for a Private Pilot Licence (PPL) with a powered-lift category rating shall complete—

(a) not less than 40 hours of flight time as a pilot of powered-lift; and

(b) not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full stop landing at two different aerodromes shall be made.

(7) Except for balloons and gliders, an applicant for PPL who has flight time as a pilot in other categories may be credited with 10 hours of the total flight time.

40. Privileges and limitations.

(1) Except as provided in sub-regulations (2) to (7) , a holder of a Private Pilot Licence (PPL) shall not act as a crew member of an aircraft—

(a) carrying passengers or property for compensation or hire; or

(b) operated for compensation or hire.

(2) A holder of a PPL may exercise the privileges of a holder of a flight radiotelephone operator licence as prescribed in regulation 129.

(3) A holder of a PPL may, for compensation or hire, act as a crewmember of an aircraft in connection with any business or employment if—

(a) the flight is only incidental to that business or employment; and

(b) the aircraft does not carry passengers or property for compensation or hire.

(4) A holder of a PPL may act as a crewmember of an aircraft used in a passenger-carrying flight sponsored by a charitable organisation described in paragraph (g), and for which the passengers make a donation to the organisation, where the following requirements are met—

(a) the sponsor of the flight notifies the Authority at least seven days before the event and submits-

(i) a signed letter from the sponsor that shows the name of the sponsor, the purpose of the charitable event, the date and time of the event and the location of the event; and

(ii) a photocopy of each crew member's pilot licence, medical certificate and logbook entries that show the pilot has a valid licence and has logged at least two hundred hours of flight time;

(b) the flight is conducted from a public airport that is adequate for the aircraft to be used or from another airport that has been approved by the Authority for the operation;

(c) no acrobatic or formation flights are conducted;

(d) each aircraft used for the charitable event holds a valid standard certificate of airworthiness;

(e) each aircraft used for the charitable event is airworthy and complies with the applicable requirements of the Civil Aviation (Operation of Aircraft) Regulations, 2014;

(f) each flight for the charitable event is made during day visual flight rules conditions; and

(g) the charitable organisation is an organisation identified as such by the appropriate authority of the government.

(5) A holder of a PPL may be reimbursed for aircraft operating expenses that are directly related to search and rescue operations, if the expenses involve only fuel, oil, airport expenditure or rental fees and the operation is sanctioned and under the direction and control of –

(a) a government agency; or

(b) an organisation that conducts search and rescue operations.

(6) A holder of a PPL who is an aircraft salesman and who has logged at least two hundred hours of logged flight time may demonstrate an aircraft in flight to a prospective buyer.

(7) A holder of a PPL shall not pay less than the pro rata share of the operating expenses of a flight with passengers, if the expenses involve only fuel, oil, airport expenditures, or rental fees.

(8) Subject to sub-regulations (2) to (7), a holder of a PPL shall, not for compensation or hire, act as a co-pilot of an aircraft that is type certified for more than one pilot.

41. Renewal requirements.

A PPL may be renewed if the holder of the licence has logged the following hours as PIC on either category, class or type rating sought within the twelve months preceding the date of application for renewal-

(a) for aeroplane and rotorcraft not less than 5 hours; and

(b) for a glider or lighter-than- air aircraft not less than 3 hours.

Commercial Pilot Licence

42. Eligibility requirements.

(1) An applicant for a Commercial Pilot Licence (CPL) shall—

(a) be at least eighteen years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations;

(c) receive a logbook endorsement from an authorised instructor who—

(i) conducted the required ground training on the aeronautical knowledge areas listed in regulation 43, that apply to the aircraft category and class rating sought; and

(ii) certified that the person is prepared for the required knowledge test that applies to the aircraft category and class rating sought.

(d) pass the required knowledge test on the aeronautical knowledge areas listed in regulation 47;

(e) receive the required training and a logbook endorsement from an authorised instructor who-

(i) conducted the training on the areas of operation listed in regulation 44 that apply to the aircraft category and class rating sought; and

(ii) certified that the person is prepared for the required practical test.

(f) be in possession of a Class 1 Medical Certificate issued under these Regulations;

(g) meet the aeronautical experience requirements under these Regulations that apply to the aircraft category and class rating sought before applying for the practical test;

(h) pass the required practical test on the areas of operation listed in regulation 44 that apply to the aircraft category and class rating sought;

(i) hold a PPL issued under these Regulations or meet the requirements of regulation 15 , pertaining to military licences; and

(j) comply with all sections of these Regulations which apply to the aircraft category and class rating sought.

43. Aeronautical knowledge requirements.

(1) An applicant for a Commercial Pilot Licence (CPL) shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of such licence and appropriate to the category of aircraft intended to be included in the licence.

(2) The aeronautical knowledge areas applicable to any relevant aircraft category and class rating shall be as follows—

(a) air law;
rules and regulations relevant to the holder of a CPL, rules of the air; appropriate air traffic services practices and procedures;

(b) aircraft general knowledge including-

(i) principles of operation and functioning of powerplants, systems and instruments;

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

(iii) use and serviceability checks of equipment and systems of appropriate aircraft category;

(iv) maintenance procedures for airframes, systems and powerplants of appropriate aircraft category;
(v) for helicopter and powered-lift, transmission (power-trains) where applicable;

(vi) for airship, physical properties and practical application of gases;

(c) flight performance, planning and loading including-

(i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations;

(ii) use and practical application of take-off, landing and other performance data;

(iii) pre-flight and enroute flight planning appropriate to commercial operations under VFR;

(iv) preparation and filing of air traffic services flight plans and appropriate air traffic services procedures;

(v) in the case of airship, helicopter and powered-lift effects of external loading;

(d) human performance-
human performance relevant to the CPL including principles of threat and error management;

(e) meteorology including-

(i) interpretation and application of aeronautical meteorological reports, charts and forecasts, use of and procedures for obtaining, meteorological information, pre-flight and in-flight and altimetry;

(ii) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the moment of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions and hazardous weather avoidance;

(iii) causes, recognition and effects of icing, frontal zone penetration procedures;hazardous weather avoidance;

(f) navigation-
air navigation, including the use of aeronautical charts, instruments and navigation aids, understanding of the principles and characteristics of appropriate navigation systems and operation of air borne equipment;

(g) operation procedures including-

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

(ii) appropriate precautionary and emergency procedures;

(iii) operational procedures for carriage of freight; potential hazards associated with dangerous goods;

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

(v) night and high altitude;

(vi) application of threats and error management principles to operational performance;

(vii) altimeter setting procedures;

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

(h) principles of flight-
principles of flight relating to aircraft;

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

(3) The aeronautical knowledge areas applicable to any relevant rotorcraft category and class rating shall include all areas covered under sub-regulation (2) in addition to the following areas—

(a) powerplants; transmissions (power trains);

(b) external loads on helicopter handling;

(c) settling with power, ground resonance, roll-over and other operating hazards; and

(d) operational procedures for carriage of freight including external loads.

(4) The aeronautical knowledge areas applicable to any relevant lighter-than-air category and class rating shall be as follows—

(a) air law-
rules and regulations relevant to the holder of a free balloon pilot licence; rules of the air; appropriate air traffic services practices and procedures;

(b) aircraft general knowledge—

(i) principles of operation of free balloon systems and instruments;

(ii) operating limitations of free balloons, relevant operational information from the flight manual or other appropriate document;

(iii) physical properties and practical application of gases used in free balloons;

(c) flight performance and planning—

(i) effects of loading on flight characteristics and mass calculations;

(ii) use and practical application of launching, landing and other performance data, including the effect of temperature;

(iii) pre-flight and en-route flight planning appropriate to operations under VFR, appropriate air traffic services procedures and altimeter setting procedures, operations in areas of high-density traffic;

(d) human performance-
human performance relevant to the free balloon pilot;

(e) meteorology;
application of elementary aeronautical meteorology, use of and procedures for obtaining, meteorological information; altimetry;

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

(g) operational procedures—

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

(ii) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

(iii) application of threats and error management principles to operational performance;

(h) principles of flight-
principles of flight relating to free balloons;

(i) in case of airship—

(i) use, limitation and serviceability of avionics and instruments necessary for the control and navigation;

(ii) use accuracy and reliability of navigation systems used in departure; and

(iii) principles and characteristics of self-contained and external referenced navigation systems and operation of airborne equipment.

44. Flight instruction requirements.
An applicant for a Commercial Pilot Licence (CPL), shall receive and record ground and flight training from an authorised instructor on the following areas of operation that apply to the aircraft category and class rating sought—

(a) for all categories and class ratings, as applicable—

(i) pre-flight operations, including mass and balance determination, aircraft inspection and servicing;

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

(iii) control of the aircraft by external visual reference;

(iv) flight at critically slow airspeeds; spin avoidance; recognition of and recovery from incipient and full stalls;

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

(vi) normal and cross-wind take-offs and landings;

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

(viii) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

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

(x) abnormal and emergency procedures and manoeuvres; and

(xi) operations to, from and transitting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology.

(b) in addition to the areas of operation specified in paragraph (a), the applicable areas of operation for a multiengine class rating are as follows—

(i) emergency operations; including the applicant's knowledge and performance of the following tasks-

(aa) emergency descent;

(bb) engine failure during take-off before Vmc (simulated);

(cc) engine failure after lift-off (simulated);

(dd) approach and landing with one inoperative engine (simulated);

(ee) systems and equipment malfunctions; and

(ff) emergency equipment and survival gear

(ii) high altitude operations; including the applicant's knowledge and performance of the following tasks—

(aa) supplemental oxygen; and

(bb) pressurisation.

(iii) multi-engine operations: including the applicant's knowledge and performance of the following tasks—

(aa) manoeuvring with one engine inoperative;

(bb) Vmc demonstration;

(cc) engine failure during flight (by reference to instruments); and

(dd) instrument approach with one engine inoperative (by reference to instruments).

(c) for a rotorcraft category rating with a helicopter type rating—

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

(bb) ground manoeuvring and run-ups, hovering, take-offs and landings - normal, out of wind and sloping ground, steep approaches;

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

(dd) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;

(ee) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments; and

(ff) abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing;

(d) for a rotorcraft category rating with a gyroplane class rating: flight at slow airspeeds;

(e) for a lighter-than-air category rating with a balloon or airship class rating—

(i) fundamentals of instructing;

(ii) pre-flight operations, assembly, rigging, inflation, mooring and inspection;

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

(iv) collision avoidance precautions;

(v) control by external visual reference;

(vi) recognition of and recovery from rapid descents;

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

(viii) approaches and landings, including ground handling; and

(ix) emergency procedures;

(x) recognise and manage threats and errors;

(xi) recognition of leaks;

(xii) flight under IFR; and

(xiii) communication procedures and phraseology.

45. Aeronautical experience and skill requirements for Commercial Pilot Licence.

(1) An applicant for a Commercial Pilot Licence (CPL), aeroplanes shall obtain the following hours of aeronautical experience—

(a) not less than 200 hours of flight time, or 150 hours if completed during an integrated course of approved training provided for in an approved training organisation under the Civil Aviation (Approved Training Organisation) Regulations, 2014 as a pilot of aeroplanes, of which 10 hours may have been completed in a synthetic flight trainer;

(b) in aeroplanes, not less than—

(i) 100 hours as PIC or in the case of a course of approved training, 70 hours as PIC;

(ii) 20 hours of cross-country flight time as PIC including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made;

(iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument time in the synthetic flight trainer;

(iv) 5 hours of night flying including 5 take-offs and 5 landings as PIC.

(c) the holder of a pilot licence in another category may be credited towards the 200 hours of flight time as follows—

(i) 10 hours as PIC in a category other than helicopters;

(ii) 30 hours as PIC holding a PPL on helicopters; or

(iii) 100 hours as PIC holding a CPL on helicopters.

(2) An applicant for a CPL helicopter licence shall complete-

(a) not less than 150 hours of flight time, or 100 hours if completed during an integrated course of approved training provided for in an approved training Organisation under the Civil Aviation (Approved Training Organisation) Regulations, 2014 as a pilot of helicopters, of which 10 hours may have been completed in a synthetic flight trainer;

(b) not less than—

(i) 35 hours as PIC;

(ii) 10 hours of cross-country flight time as PIC including a cross-country flight in the course of which full-stop landings at two different points shall be made;

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

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

(3) The holder of a pilot licence in the helicopter category may be credited towards the 150 hours of flight time as follows-

(i) 20 hours as PIC holding a PPL in aeroplanes; or

(ii) 50 hours as PIC holding a CPL in aeroplanes.

(4) An applicant for a CPL (gyroplane) shall complete–

(i) 150 hours of flight time as a pilot, including at least 100 hours in powered aircraft, of which 25 hours shall be in gyroplanes;

(ii) 100 hours of PIC flight time, including at least -

(aa) 10 hours in gyroplanes; and

(bb) 3 hours in cross-country flight in gyroplanes; and

(iii) 20 hours of training on the areas of operation listed in regulation 44 including at least-

(aa) 5 hours of instrument training in an aircraft;

(bb) one cross-country flight of at least 2 hours in a gyroplane in day VFR conditions, consisting of a total straight-line distance of more than fifty nautical miles from the original point of departure; and

(iv) 10 hours of solo flight in a gyroplane on the areas of operation listed in regulation 44, including at least—

(aa) one cross-country flight with landings at a minimum of three points, with one segment consisting of a straight-line distance of at least fifty nautical miles from the original point of departure; and

(bb) 5 hours in night visual flight rules conditions with ten takeoffs and ten landings with each landing involving a flight in the traffic pattern.

(5) An applicant for a commercial pilot licence lighter than air (airship category) shall complete not less than 200 hours of flight time as a pilot, including not less than-

(a) 50 hours as a pilot of airships;

(b) 30 hours in airships as pilot-in-command or pilot-in-command under supervision, to 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 airships; and

(d) 20 hours of flight training in airships in the areas of operation listed in regulation 44.

(6) An applicant for a CPL lighter than air (balloon category) shall complete 35 hours which consists of not less than 20 hours training flights in the areas of operation that includes-

(a) for a gas balloon—

(i) two training flights of not less than two hours each in the appropriate areas of operation within sixty days prior to application for the rating;

(ii) 10 hours as PIC;

(iii) two flights involving a controlled ascent to five; and

(iv) thousand feet above the launch site.

(b) for a balloon with an airborne heater—

(i) two training flights of two hours each in the appropriate areas of operation within sixty days prior to application for the rating;

(ii) 10 hours as PIC; and

(iii) two flights involving a controlled ascent to five thousand feet above the launch site.

(c) for a free balloon—

(i) the procedures and manoeuvres described in regulation 38(f) with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence;

(ii) recognise and manage threats and errors;

(iii) operate the free balloon within its limitations;

(iv) complete all manoeuvres with smoothness and accuracy;

(v) exercise good judgement and airmanship;

(vi) apply aeronautical knowledge; and

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

46. Privileges and limitations.

(1) A holder of a Commercial Pilot Licence (CPL) may—

(a) exercise all the privileges of the holder of a PPL as stipulated in regulation 40;

(b) act as a pilot-in-command and co-pilot in an aircraft engaged in operations other than commercial air transportation;

(c) act as a pilot-in-command in commercial air transportation in an aircraft certificated for single pilot operation;

(d) act as a co-pilot in commercial air transportation in an aircraft required to be operated with a co-pilot;

(e) exercise all the privileges of the holder of a flight radiotelephone operator licence as stipulated in regulation 129; and

(f) fly at night.

(2) A holder of a CPL may act as PIC of an aircraft for compensation or hire, including the carriage of persons or property for compensation or hire, provided the pilot is qualified under these Regulations.

(3) A holder of a CPL shall not act as a PIC of an aircraft of certificated take-off mass of over 5,700 kgs.

47. Renewal requirements.

A holder of a CPL may apply for renewal of the licence if he or she has logged as PIC or co-pilot within the six months preceding the date of application for renewal, the following hours—

(a) for aeroplanes and rotorcraft; not less than 6 hours and 6 take-offs and landings; and

(b) for lighter-than-air; 3 hours and 3 launches and landings.

48. Eligibility requirements.

An applicant for an Airline Transport Pilot Licence (ATPL) shall—

(a) be at least twenty one years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Second Schedule to these Regulations;

(c) meet at least one of the following requirements—

(i) hold a valid and current Commercial Pilot Licence (CPL) and an instrument rating;

(ii) the military experience requirements under regulation 15 in order to qualify for a CPL, and an instrument rating if the person is a rated military pilot or former rated military pilot; or

(iii) hold either a foreign ATPL or a foreign CPL and an instrument rating issued by another Contracting State.

(d) meet the applicable aeronautical experience requirements of this sub-part before applying for the practical test;

(e) pass a knowledge test on the applicable aeronautical knowledge areas of regulation 49 that apply to the aircraft category and class rating sought; and

(f) pass the practical test on the applicable areas of operation specified in regulation 49, that apply to the aircraft category and class rating sought; and

(g) have a valid Class 1 Medical Certificate issued under these Regulations.

49. Aeronautical knowledge requirements for Airline Transport Pilot Licence.

(1) Subject to sub-regulation (2), an applicant for an Airline Transport Pilot Licence (ATPL), shall receive and record ground training in a manner prescribed by the Authority, on the aeronautical knowledge areas that apply to aeroplane and helicopter aircraft categories.

(2) The aeronautical knowledge areas applicable to aeroplane aircraft category shall be as follows—

(a) air law;
rules and regulations relevant to the holder of an airline transport pilot licence for aircraft, rules of the air, appropriate air traffic services, practices and procedures;

(b) aircraft general knowledge—

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

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

(iii) operating procedures and limitations of appropriate aircraft; effects of atmospheric conditions on aircraft performance;

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

(v) flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;

(vi) maintenance procedures for airframes, systems and powerplants of appropriate aircraft;

(c) flight performance, planning and loading—

(i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations;

(ii) use and practical application of take-off, landing and other performance data, including procedures for cruise control;

(iii) pre-flight and enroute operational flight planning, preparation and filing of air traffic services flight plans, appropriate air traffic services procedures and altimeter setting procedures;

(d) human performance-
human performance including principles of threat and error management relevant to the airline transport pilot for aircraft;

(e) meteorology—

(i) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations, use of, and procedures for obtaining, meteorological information, pre-flight and in-flight and altimetry;

(ii) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;

(iii) causes, recognition and effects of engine and airframe icing, frontal zone penetration procedures, hazardous weather avoidance;

(iv) practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts and jetstreams;

(f) navigation—

(i) air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems, specific navigation requirements for long-range flights;

(ii) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft;

(iii) use, accuracy and reliability of navigation systems used in departure, enroute, approach and landing phases of flight; identification of radio navigation aids;

(iv) principles and characteristics of self-contained and external- referenced navigation systems; operation of airborne equipment;

(g) operational procedures-

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

(ii) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations and instrument procedure charts for departure, en-route, descent and approach;

(iii) precautionary and emergency procedures; safety practices associated with flight under IFR;

(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; and

(vi) night and high altitude;

(h) principles of flight-
principles of flight relating to aircraft; subsonic aerodynamics; compressibility effects, manoeuvre boundary limits, wing design characteristics, effects of supplementary lift and drag devices; relationships between lift, drag and thrust at various airspeeds and in different flight configurations;

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

(3) The aeronautical knowledge areas applicable to helicopter category rating shall include all areas covered under sub-regulation (2) and in addition the following areas—

(a) helicopter general knowledge—

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

(ii) principles of operation, handling procedures and operating limitations of helicopter powerplants; transmission (power-trains); effects of atmospheric conditions on engine performance; relevant operational information from the flight manual;

(iii) operating procedures and limitations of appropriate helicopters, effects of atmospheric conditions on helicopter performance, relevant operational information from the flight manual;

(b) flight performance and planning—

(i) effects of loading and mass distribution, including external loads, on helicopter handling, flight characteristics and performance, mass and balance calculations;

(ii) causes, recognition and effects of engine, airframe and rotor icing, hazardous weather avoidance;

(c) navigation-
use, accuracy and reliability of navigation systems; identification of radio navigation aids;

(d) operational procedures—

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

(ii) precautionary and emergency procedures; settling with power, ground resonance, retreating blade stall, dynamic roll-over and other operating hazards; safety practices associated with flight under VFR;

(iii) operational procedures for carriage of freight, including external loads, and dangerous goods;

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

(e) principles of flight-
principles of flight relating to helicopters;

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

50. Flight instruction requirements.
An applicant for Airline Transport Pilot Licence (ATPL) for aeroplanes or helicopters shall receive the flight instruction required for the issue of commercial pilot licence as prescribed in regulation 44 and—

(a) for ATPL aeroplanes, shall receive the flight instructions required for the issue of the instrument rating prescribed in regulation 70; or

(b) for ATPL helicopters if the privileges of instrument rating are to be exercised, shall receive the flight instructions required for the issue of the instrument rating prescribed in regulation 70.

(2) An applicant 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 services 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 powerplant, systems and airframe;

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

(e) in the case of aeroplanes and powered-lifts, procedures and manoeuvres for instrument flight including simulated engine failure.

(3) In the case of an aeroplane, the applicant shall demonstrate the ability to perform the procedures and manoeuvres described in sub regulation (2) as pilot-in-command of a multiengined aeroplane.

51. Aeronautical experience requirements.

(1) An applicant for an airline transport pilot licence shall complete in the case of—

(a) an aeroplane, not less than 1500 hours of flight time as a pilot of aeroplanes; or

(b) helicopter, not less than 1000 hours of flight time as a pilot of helicopter;

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.

(2) The applicant shall complete in aircraft not less than -

(a) in aeroplanes: 500 hours as pilot-in-command under supervision or 250 hours, either as pilot-in-command or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;

(b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as co-pilot performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;

(c) in helicopters: 250 hours, either as pilot-in-command or made up of not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in command under supervision;

(d) for aeroplanes: 75 hours of instrument time, of which not more than 30 hours may be obtained in the synthetic flight trainer and for helicopter 30 hours of instrument time, of which not more than 10 hours may be obtained in the synthetic flight trainer; and

(e) for aeroplanes, 100 hours and for helicopters 50 hours of night flight as PIC or as co-pilot.

(3) Where the applicant for ATPL for aeroplanes or rotorcraft has flight time as a pilot of either category, the applicant shall be credited with 50% of the flight time as PIC towards the flight time of the category sought as required in sub-regulation (1).

(4) An applicant shall demonstrate the ability to perform the procedures and manoeuvres described in regulation 50(2) 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 the maintenance of situational awareness; and

(f) communicate effectively with other flight crewmembers and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

(5) When the holder of an airline transport pilot licence in the aeroplane category 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, as appropriate, established for—

(a) private pilot licence: to exercise all the privileges of the holder of a private pilot licence in the aeroplane category provided the requirements of regulation 38 and 39 have been met;

(b) before exercising the privileges of the instrument rating in a single-pilot operation in aeroplanes, the licence holder shall demonstrate an ability to act as pilot-in command in a single-pilot operation exercised by reference solely to instruments and shall meet the skill requirement specified in regulation 67 appropriate to the aeroplane category;

(c) before exercising the privileges of a commercial pilot licence in a single-pilot operation in aeroplanes, the licence holder shall—

(i) complete in aeroplanes, 70 hours, either as pilot-in-command or made up of not less than 10 hours as pilot-in- command and the necessary additional flight time as pilot-in-command under supervision;

(ii) complete 20 hours of cross-country flight time as pilot-in-command or made up of not less than 10 hours as pilot-in-command and 10 hours as pilot-in command under supervision, including a cross-country flight totaling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made; and

(iii) meet the requirements for the commercial pilot licence specified in regulations 43, 44 and 45 with the exception of regulation 44(a) and 45(b)(i), appropriate to the aeroplane category.

(6) Any limitation of privileges specified in sub regulation (5) shall be endorsed on the licence.

52. Additional aircraft category, class and type ratings.

An applicant who holds a valid Airline Transport Pilot Licence (ATPL) and seeks additional aircraft category, class and type rating shall—

(a) meet the applicable eligibility requirements;

(b) pass a knowledge test on the applicable aeronautical knowledge areas;

(c) meet the applicable aeronautical experience requirements; and

(d) pass the practical test on the areas of operation.

53. Privileges and limitations.

(1) A holder of an Airline Transport Pilot Licence (ATPL) may-

(a) exercise all the privileges of a holder of a Private Pilot Licence and Commercial Pilot Licence and Instrument Rating for aeroplane as stipulated in regulations 40, 46 and 74;

(b) act as pilot-in-command and co-pilot in commercial air transport; and

(c) exercise all the privileges of the holder of a flight radiotelephone operator licence as stipulated in regulation 129.

(2) A holder of an ATPL may be authorised to act as a flight instructor, not being a holder of a flight instructor rating, when instructing pilots within an Air Operator Certificate holder's approved training programme in aircraft of the category, class and type, as applicable, for which the airline transport pilot is rated and in synthetic flight trainers of those aircraft and endorse the logbook or other training record of the person to whom training has been given.

(3) A holder of an ATPL shall not instruct in an aircraft or in an approved synthetic flight trainer except for the briefing and debriefing sessions—

(a) for more than eight hours in any twenty four-consecutive-hour period; or

(b) for more than thirty six hours in any seven-consecutive-day period.

(4) A holder of an ATPL shall not instruct in Category II or Category III operations unless he or she has been trained and has been successfully tested under Category II or Category III operations, as applicable.

54. Renewal requirements.
A holder of an Airline Transport Pilot Licence may apply for renewal of the licence if the holder of the licence has logged not less than 6 hours as pilot in command or co-pilot and has done six take-offs and landings within the six months preceding the date of application for renewal.

Multi-crew Pilot Licence

55. Eligibility requirements.
An applicant for Multi-crew Pilot Licence (MPL), shall—

(a) be not less than eighteen years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations;

(c) meet at least one of the following requirements-

(i) demonstrate a level of knowledge appropriate to the privileges granted to the holder of an airline transport pilot licence and appropriate to the aeroplane category in an approved training course;

(ii) hold either a foreign MPL or a foreign ATPL and an instrument rating issued by another Contracting State.

(d) meet the applicable aeronautical experience requirements of this sub-part before applying for the practical test;

(e) pass a knowledge test on the applicable aeronautical knowledge areas of regulation 49 and 50 that apply to the aircraft category rating sought;

(f) pass the practical test on the applicable areas of operation specified in regulation 49 and 50 that apply to the aircraft category sought; and

(g) have a valid Class 1 Medical Certificate issued under these Regulations.

56. Aeronautical knowledge requirements for Multi-crew Pilot Licence.

The applicant for a Multi-crew pilot licence (MPL) shall meet the requirements specified in the Airline transport pilot licence appropriate to the aeroplane category in an approved training course and in the Fourth Schedule.

57. Flight instruction requirements.

(1) The applicant shall complete a course of approved training covering the experience requirements in regulation 56.

(2) The applicant shall receive dual flight instruction in all the competency units specified in the Fourth Schedule, to the level required for the issue of the multi-crew pilot licence, to include the competency units required to pilot under instrument flight rules.

58. Aeronautical experience and skill requirements for Multi-crew pilot Licence.

(1) An applicant for Multi-crew pilot licence shall complete in an approved training course of not less than 240 hours as pilot flying and pilot not flying of actual and simulated flight.

(2) Flight experience in actual flight shall include at least the experience requirements stipulated under regulation 39, upset recovery training, night flying and flight by reference solely to instruments.

(3) In addition to meeting the requirements in sub regulation (2), the applicant shall gain, 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 paragraph 4 of the Fourth Schedule, the experience necessary to achieve the advanced level of competency defined in the Fourth Schedule.

(4) The applicant 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 services 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 powerplant, systems and airframe;

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

(e) in the case of aeroplanes and powered-lifts, procedures and manoeuvres for instrument flight described in regulation 72, including simulated engine failure.

(5) In the case of an aeroplane, the applicant shall demonstrate the ability to perform the procedures and manoeuvres described in sub regulation (4) as pilot-in-command of a multi-engined aeroplane.

(6) The applicant shall demonstrate the ability to perform the procedures and manoeuvres described in subregulation (4) 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 the maintenance of situational awareness; and

(f) communicate effectively with other flight crewmembers and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

59. Privileges and limitations.

(1) A holder of Multi-Crew Pilot Licence (MPL) shall—

(a) exercise all the privileges of the holder of a private pilot licence in the aeroplane category provided the requirements of regulation 40 have been met;

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

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

(2) A holder of Multi-Crew Pilot Licence shall before exercising the privileges of the instrument rating in a single-pilot operation in aeroplanes demonstrate an ability to act as pilot-in command in a single-pilot operation exercised by reference solely to instruments and shall meet the skill requirement of regulation 70 appropriate to the aeroplane category.

(3) A holder of Multi-Crew Pilot Licence shall before exercising the privileges of a commercial pilot licence in a single-pilot operation in aeroplanes—

(a) complete in aeroplanes, 70 hours, either as pilot-in command or made up of not less than 10 hours as pilot-in- command and the necessary additional flight time as pilot-in-command under supervision;

(b) complete 20 hours of cross-country flight time as pilot-in-command or made up of not less than 10 hours as pilot-in-command and 10 hours as pilot-in command under supervision, including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made; and

(c) met the requirements for the commercial pilot licence with the exception of regulation 45 (1) (b).

60. Renewal requirements.
A holder of Multi-Crew Pilot Licence may apply for renewal of the licence if the holder of the licence has logged not less than 6 hours as pilot in command or co-pilot and has done six take-offs and landings within the six months preceding the date of application for renewal.

PART VII—PILOT RATINGS AND AUTHORISATIONS.

61. Category rating.
A pilot seeking a category rating shall—

(a) receive the required training and possess the aeronautical experience prescribed by these regulations for the aircraft category and if applicable, class and type rating sought;

(b) have an endorsement in that pilot's logbook or training record from an authorised instructor that the applicant is competent in the following areas, as appropriate to the pilot licence for the aircraft category and, if applicable, class and type rating sought—

(i) aeronautical knowledge areas;

(ii) areas of operation; and

(c) pass the knowledge and practical test that is appropriate to the pilot licence for the aircraft category and if applicable, the class rating sought.

62. Class ratings.

A pilot seeking an additional class rating—

(a) shall have an endorsement in that pilot's logbook or training record from an authorised instructor that the applicant is competent in the following areas, as appropriate to the pilot licence and for the aircraft class rating sought;

(i) aeronautical knowledge area; and

(ii) areas of operation.

(b) shall pass the practical test applicable to the pilot licence for the aircraft class rating sought;

(c) need not meet the training time requirements prescribed under these Regulations for the aircraft class rating sought; and

(d) need not take an additional knowledge test if the applicant holds an aeroplane, rotorcraft or airship category at that pilot licence level.

63. Type ratings.

(1) To act as a pilot in command of—

(a) an aircraft certificated for at least two pilots;

(b) any aircraft considered necessary by the Authority; or

(c) each type of helicopter,

a pilot shall hold a type rating for that aircraft.

(2) A person shall not act as a commercial pilot in an aeroplane of which the maximum certificated take-off mass of over 2,300 kg unless that person's licence includes an Instrument Rating.

(3) A pilot seeking an aircraft type rating to be added on a pilot licence or the addition of an aircraft type rating that is accomplished concurrently with an additional aircraft category or class rating shall—

(a) have an endorsement in the logbook or training record from an authorised instructor that the applicant is competent in the areas of operation appropriate to the pilot licence for the aircraft category, class and type rating sought and the applicant has logged-

(i) for aeroplanes of maximum certificated take-off mass of 5,700 kgs or below, not less than 5 hours of flight time under the supervision of an authorised flight instructor in the aircraft type sought; and

(ii) for aeroplanes of maximum certificated take-off mass of over 5,700 kgs where training is conducted in a—

(aa) synthetic flight trainer, not less than 30 hours of synthetic flight trainer time and 3 hours of actual flying time in the aircraft type sought;

(bb) Level D synthetic flight trainer of the aircraft type sought approved by the Authority, not less than 36 hours.

(b) pass the flight check-out for the aircraft type rating sought; and

(c) pass a knowledge test on the aircraft type on which the rating is sought.

64. Category II and III operations pilot authorisation requirements.

(1) An applicant for a Category II or Category III operations pilot authorisation shall—

(a) hold a pilot licence with an instrument rating or an airline transport pilot licence;

(b) hold a category and class rating and type rating, for the aircraft for which the authorisation is sought; and

(c) complete the practical test requirements.

(2) An applicant for a Category II or Category III operations pilot authorisation shall have at least—

(a) 50 hours of night flight time as PIC;

(b) 75 hours of instrument time under actual or simulated instrument conditions that may include not more than—

(i) a combination of 25 hours of simulated instrument flight time in an approved synthetic flight trainer; or

(ii) 40 hours of simulated instrument flight time if accomplished in an approved course conducted by an appropriately rated approved training organisation certified under the Civil Aviation (Approved Training Organisations) Regulations, 2014 and

(c) 250 hours of cross-country flight time as PIC.

(3) Upon passing a practical test for a Category II or III operations pilot authorisation, a pilot may renew that authorisation for each type of aircraft for which the pilot holds the authorisation.

(4) The Authority may not renew a Category II or Category III operations pilot authorisation for a specific type aircraft for which an authorisation is held beyond twelve months from the date the applicant passed a practical test in that type of aircraft.

(5) Where the holder of a Category II or Category III operations pilot authorisation passes the practical test for a renewal in the month before the authorisation expires, the Authority will consider that the holder passed it on the date the authorisation expired.

(6) The Authority may issue a Category II or Category III pilot authorisation by way of a letter, as a part of an applicant's instrument rating or pilot licence.

(7) Upon original issue, the authorisation shall contain the following limitations—

(a) for Category II operations, five hundred metres runway visual range (RVR) and a one hundred and fifty feet decision height (DH); and

(b) for Category III operations, as specified in the authorisation document.

(8) To remove the limitations on a Category II or Category III pilot authorisation—

(a) a Category II operations limitation holder may remove the limitation by showing that, since the beginning of the sixth preceding month, the holder has made three Category II operations ILS approaches with a one hundred and fifty foot-decision height to a landing under actual or simulated instrument conditions; or

(b) a Category III operations limitation holder may remove the limitation by showing experience as specified in the authorisation.

(9) An authorisation holder or an applicant for an authorisation may use a synthetic flight trainer if that synthetic flight trainer is approved by the Authority for such use, to meet the experience requirement of sub-regulation (11) or for the practical test required by these Regulations for a Category II or a Category III operations pilot authorisation, as applicable.

(10) An applicant for the—

(a) issue or renewal of a Category II operations pilot authorisation; and

(b) the addition of another type of aircraft to a Category II operations pilot authorisation shall pass a practical test.

(11) To be eligible for the practical test for an authorisation under this regulation, an applicant shall—

(a) meet the requirements of this regulation; and

(b) if the applicant has not passed a practical test for this authorisation within the twelve months preceding the date of the test—

(i) meet the requirements of the Civil Aviation (Operation of Aircraft) Regulations, 2014; and

(ii) have performed at least six ILS approaches within the six calendar months preceding the date of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(12) An applicant shall accomplish the approaches specified in sub-regulation (11)(b)(ii) –

(a) under actual or simulated instrument flight conditions;

(b) to the minimum decision height for the ILS approach in the type aircraft in which the practical test is to be conducted, except that the approaches need not be conducted to the decision height authorised for Category II operations;

(c) to the decision height authorised for Category II operations only if conducted in an approved synthetic flight trainer qualified for Category II operations; and

(d) in an aircraft of the same category and class and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved synthetic flight trainer that—

(i) represents an aircraft of the same category and class and type, as applicable, as the aircraft in which the authorisation is sought; and

(ii) is used in accordance with an approved course conducted by an approved training organisation certified under the Civil Aviation (Approved Training Organisations) Regulations, 2014.

(13) The flight time acquired in meeting the requirements of sub-regulation (11) (b)(ii) may be used to meet the requirements of sub-regulation (11)(b)(i).

(14) A category II operations practical test consists of an oral and flight increment—

(a) in case of an oral increment test, the applicant shall demonstrate knowledge of the following—

(i) required landing distance;

(ii) recognition of the decision height;

(iii) missed approach procedures and techniques using computed or fixed altitude guidance displays;

(iv) use and limitations of RVR;

(v) use of visual clues, their availability or limitations and altitude at which they are normally discernible at reduced RVR;

(vi) procedures and techniques related to transition from nonvisual to visual flight during a final approach under reduced RVR;

(vii) effects of vertical and horizontal windshear;

(viii) characteristics and limitations of the ILS and runway lighting system;

(ix) characteristics and limitations of the flight director system, auto approach coupler, including split axis type if equipped, auto throttle system if equipped and other required Category II operations equipment;

(x) assigned duties of the co-pilot during Category II approaches, unless the aircraft for which authorisation is sought does not require a co-pilot; and

(xi) instrument and equipment failure warning systems.

(b) in the case of a flight increment test it shall be conducted in an aircraft of the same category, class and type, as applicable, as the aircraft in which the authorisation is sought or in an approved synthetic flight trainer that—

(i) represents an aircraft of the same category and class and type, as applicable, as the aircraft in which the authorisation is sought; and

(ii) is used in accordance with an approved course conducted by an ATO certificated under the Civil Aviation (Approved Training Organisations) Regulations, 2014;

(aa) the flight increment shall consist of at least two ILS approaches to one hundred feet above including at least one landing and one missed approach;

(bb) all approaches performed during the flight increment shall be made with the use of an approved flight control guidance system, except if an approved auto approach coupler is installed, at least one approach shall be hand flown using flight director commands;

(cc) if a multiengine aeroplane with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the flight increment shall include the performance of one missed approach with an engine, which shall be the most critical engine, if applicable, set at idle or zero thrust before reaching the middle marker;

(dd) if an approved multi-engine synthetic flight trainer is used for the practical test, the applicant shall execute a missed approach with the most critical engine, if applicable, failed;

(ee) for an authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a co-pilot who holds a type rating in the aircraft in which the authorisation is sought;

(ff) the Authority's inspector or evaluator may conduct oral questioning at any time during a practical test.

(15) The Authority shall require that an applicant pass a practical test for—

(a) issue or renewal of a Category III operations pilot authorisation; or

(b) the addition of another type of aircraft to a Category III operations pilot authorisation.

(16) To be eligible for the practical test an applicant shall—

(a) meet the requirements of this regulation; and

(b) if the applicant has not passed a practical test for this authorisation during the twelve calendar months preceding the month of the test shall—

(i) meet the requirements of the Civil Aviation (Operation of Aircraft) Regulations, 2014 and

(ii) perform at least six ILS approaches during the six calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(17) An applicant shall conduct the approaches specified in sub-regulation (16)(b)(ii)—

(a) under actual or simulated instrument flight conditions;

(b) to the alert height or decision height for the ILS approach in the type of aircraft in which the practical test is to be conducted;

(c) not necessarily to the decision height authorised for Category III operations;

(d) to the alert height or decision height, as applicable, authorised for Category III operations only if conducted in an approved synthetic flight trainer; and

(e) in an aircraft of the same category and class and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved synthetic flight trainer that—

(i) represents an aircraft of the same category and class and type, as applicable, as the aircraft for which the authorisation is sought; and

(ii) is used in accordance with an approved course conducted by an approved training organisation certificated under the Civil Aviation (Approved Training Organisations) Regulations, 2014.

(18) An applicant for a Category III operations pilot authorisation shall demonstrate knowledge of the following—

(a) required landing distance;

(b) determination and recognition of the alert height or decision height, as applicable, including use of a radio altimeter;

(c) recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or decision height, as applicable;

(d) missed approach procedures and techniques using computed or fixed attitude guidance displays and expected height loss as they relate to manual go around or automatic go around and initiation altitude, as applicable;

(e) use and limitations of RVR, including determination of controlling RVR and required transmissometers;

(f) use, availability or limitations of visual cues and the altitude at which they are normally discernible at reduced RVR readings including—

(i) unexpected deterioration of conditions to less than minimum RVR during approach, flare and rollout;

(ii) demonstration of expected visual references with weather at minimum conditions;

(iii) the expected sequence of visual cues during an approach in which visibility is at or above landing minima; and

(iv) procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced RVR;

(g) effects of vertical and horizontal windshear;

(h) characteristics and limitations of the ILS and runway lighting system;

(i) characteristics and limitations of the flight director system auto approach coupler, including split axis type if equipped, auto throttle system, if equipped and other Category III operations equipment;

(j) assigned duties of the co-pilot during Category III operations, unless the aircraft for which authorisation is sought does not require a co-pilot;

(k) recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare and if applicable, rollout; and

(l) recognition of and reaction to airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.

(19) An applicant for Category III operations pilot authorisation may conduct the practical test in an aircraft of the same category and class and type, as applicable, as the aircraft for which the authorisation is sought or in an approved synthetic flight trainer that-

(a) represents an aircraft of the same category and class and type, as applicable, as the aircraft in which the authorisation is sought; and

(b) is used in accordance with an approved course conducted by an approved training organisation certificated under the Civil Aviation (Approved Training Organisations) Regulations, 2014.

(20) A Category III operations practical test shall consist of at least two ILS approaches to one hundred feet above ground level, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the goaround manoeuvre.

(21) An applicant for Category III operations pilot authorisation shall perform all approaches during the practical test with the approved automatic landing system or an equivalent landing system approved by the Authority.

(22) If a multiengine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for Category III operations pilot authorisation practical test, the practical test shall include the performance of one missed approach with the most critical engine, if applicable, set at an idle or zero thrust before reaching the middle or outer marker.

(23) If an approved multiengine synthetic flight trainer is used for the Category III operations pilot authorisation practical test, the applicant shall execute a missed approach with an engine, which shall be the most critical engine, if applicable, failed.

(24) For a Category III operations pilot authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a co-pilot who holds a type rating in the aircraft in which the authorisation is sought.

(25) Subject to the limitations of this sub-regulation, for Category IIIB operations predicated on the use of a fail-passive rollout control system, the applicant shall execute at least one manual rollout using visual reference or a combination of visual and instrument references and shall initiate the manoeuvre by a fail-passive disconnect of the rollout control system—

(a) after main gear touchdown;

(b) prior to nose gear touchdown;

(c) in conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway; and

(d) in weather conditions anticipated in Category III B operations.

(26) A person authorised by the Authority may conduct an oral test at any time during the Category III operations pilot authorisation practical test.

65. Balloon ratings.

Where an applicant for a PPL or CPL balloon successfully takes a practical test in—

(a) a balloon with an airborne heater, the Authority shall place on the pilot licence a limitation restricting the exercise of the privileges of that licence to a balloon with an airborne heater; or

(b) a gas balloon, the Authority shall place on the pilot licence a limitation restricting the exercise of the privilege of that licence to a gas balloon.

Night Rating

66. General eligibility requirements.
A Private Pilot Licence (PPL) holder shall not act as a pilot in command by night in the aircraft unless a night rating or an instrument rating is included in his or her licence.

67. Flight instruction requirements.
An applicant for a night rating shall receive 5 hours dual instruction under a qualified instructor in night flying, five flights as pilot in command including five take offs and landings in an aircraft.

68. Privileges and limitations.
A night rating shall entitle a Private Pilot Licence (PPL) holder to act as a pilot in command of an aircraft at night but shall not entitle the holder to pilot an aircraft under IFR conditions.

69. Renewal requirements.
An applicant for a night rating renewal shall, within the immediately preceding six months, carry out as pilot in command not less than five takeoffs and five landings at night.

Instrument Rating

70. General eligibility requirements.
(1) A holder of a pilot licence shall not act either as pilot in command or as co-pilot of an aircraft under instrument flight rules unless the holder has received an instrument rating appropriate to the aircraft category.

(2) An applicant for an instrument rating shall—

(a) hold a Private Pilot Licence or Commercial Pilot Licence with an aircraft category and type rating for the instrument rating sought;

(b) receive a logbook or training record endorsement from an authorised instructor certifying that the person is prepared to take the required practical test;

(c) pass the required knowledge test on the aeronautical knowledge areas, unless the applicant already holds an instrument rating in another category; and

(d) pass the required practical test on the areas of operation in-

(i) the aircraft category and type appropriate to the rating sought; or

(ii) a synthetic flight trainer or a flight training device appropriate to the rating sought and approved for the specific manoeuvre or procedure performed.

(e) possess a valid Class 1 Medical Certificate issued under these Regulations.

71. Aeronautical knowledge requirements.

An applicant for an instrument rating (aeroplanes and helicopters) shall receive and record ground training from an authorised instructor on the following subjects—

(a) air law—
rules and regulations relevant to flight under Instrument Flight Rules (IFR); related air traffic services practices and procedures;

(b) aircraft general knowledge—

(i) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft under IFR and in instrument meteorological conditions, use and limitations of autopilot;

(ii) compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;

(c) flight performance and planning—

(i) pre-flight preparations and checks appropriate to flight under IFR;

(ii) operational flight planning; preparation and filing of air traffic services flight plans under IFR and altimeter setting procedures;

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

(e) meteorology—

(i) application of aeronautical meteorology; interpretation and use of reports, charts and forecasts; codes and abbreviations, use of and procedures for obtaining, meteorological information and altimetry;

(ii) causes, recognition and effects of engine and airframe icing, frontal zone penetration procedures and hazardous weather avoidance;

(f) navigation—

(i) practical air navigation using radio navigation aids;

(ii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;

(g) operational procedures—

(i) 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;

(ii) precautionary and emergency procedures; safety practices associated with flight under IFR;

(iii) application of threat and error management to operational performance.

(h) radiotelephony—
radiotelephony procedures and phraseology as applied to aircraft operations under IFR and action to be taken in case of communication failure.

72. Flight instruction requirements.
(1) An applicant for an Instrument Rating shall have 20 hours or more of the instrument flight time required in accordance with regulation 73 (2) (b) while receiving and logging dual instruction in aircraft from an authorised flight instructor in an aircraft or approved synthetic flight trainer, on the subjects listed in regulation 71.

(2) The applicant shall gain not less than 10 hours of the instrument flight time required in regulation 73(2)(b) while receiving dual instrument flight instruction in the aircraft category being sought from an authorised flight instructor.

(3) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an instrument rating-

(a) pre-flight procedures, including the use of the flight manual or equivalent document and appropriate air traffic services documents in the preparation of an IFR flight plan;

(b) pre-flight inspection, use of checklists, taxiing and pre-take-off checks;

(c) procedures and manoeuvres for IFR 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 IFR procedures;

(iv) holding procedures;

(v) instrument approaches to specified minima;

(vi) missed approach procedures; and

(vii) landings from instrument approaches;

(d) in-flight manoeuvres and particular flight characteristics; or

(e) demonstrate the ability to operate multiengine aircraft within the appropriate category by reference solely to instrument with one engine inoperative, or simulated inoperative, if the privileges of the instrument rating are to be exercised on such aircraft

73. Aeronautical experience and skill requirements.

(1) An applicant for an Instrument Rating shall hold a Private Pilot Licence (PPL) or a Commercial Pilot Licence or Airline Transport Pilot Licence (ATPL) for the aircraft category being sought.

(2) An applicant for instrument rating shall complete not less than-

(a) 50 hours of cross-country flight time as pilot-in-command of aircraft in categories acceptable to the Authority, of which not less than 10 hours shall be in aeroplane or helicopter; and

(b) 40 hours of instrument time in helicopters or aeroplanes of which not more than 20 hours, or 30 hours where a Flight Simulator is used, may be instrument ground time under the supervision of an authorised instructor.

(3) If the privileges of the instrument rating are to be exercised on a multi- engine aeroplane out of the 20 hours specified in regulation 73(2)(b) the applicant must have received 15 hours of dual instruction in such an aeroplane from an authorised flight instructor.

(4) An applicant shall demonstrate the ability to perform as pilot-in command of an aircraft, the procedures and manoeuvres described in regulation 70 with a degree of competency appropriate to the privileges granted to the holder of an instrument rating and to—

(a) operate the aircraft within its limitations;

(b) complete all manoeuvres with smoothness and accuracy;

(c) exercise good judgement and airmanship;

(d) apply aeronautical knowledge;

(e) maintain control of the aircraft at all times in a manner such that the successful outcome of the procedures or manoeuvre is never seriously in doubt; and

(f) recognise and manage threats and errors.

(5) An applicant shall demonstrate the ability to operate a multi-engine aeroplane solely by reference to instruments with one engine inoperative, or simulated inoperative, if the privileges of the instrument rating are to be exercised on such aeroplane.

74. Privileges and limitations.

(1) A holder of an instrument rating may act as pilot of an aeroplane flying in accordance with instrument flight rules (IFR).

(2) To exercise the privileges on a multi- engine aeroplane, the holder shall comply with the requirements of regulations 67, 69 and 71.

75. Renewal requirements.

An applicant for renewal of instrument rating shall be required by the Authrotiy to pass a flight test either on an aircraft or an approved synthetic flight trainer of an aircraft type rating included in the pilot licence.

Flight Instructor Rating

76. Eligibility Requirements.

(1) In order for an applicant to be eligible for a flight instructor rating, he or she shall—

(a) be at least eighteen years of age;

(b) hold either a CPL or ATPL with—

(i) an aircraft category and class rating that is appropriate to the flight instructor rating sought; and

(ii) an instrument rating, if the person holds a CPL and is applying for a flight instructor rating with-

(aa) an aeroplane category and multiengine class rating; and

(bb) an instrument rating;

(c) receive a logbook endorsement from an authorised instructor on the fundamentals of instructing listed in regulation 77 appropriate to the required knowledge test;

(d) pass a knowledge test on the areas listed in regulation 77;

(e) receive a logbook endorsement from an authorised instructor on the areas of operation listed in regulation 79, appropriate to the flight instructor rating sought;

(f) pass the required practical test on the areas of operations listed in regulation 79, that is appropriate to the flight instructor rating sought in—

(i) an aircraft that is representative of the category and class of aircraft for the aircraft rating sought; or

(ii) an approved synthetic flight trainer that is representative of the category and class of aircraft for the rating sought and used in accordance with an approved course at an approved training organisation certificated under the Civil Aviation (Approved Training Organisations) Regulations, 2014.

(g) accomplish the following for a flight instructor rating with an aircraft rating—

(i) receive a logbook endorsement from an authorised instructor indicating that the applicant is competent and possesses instructional proficiency in stall awareness,

spin entry, spins and spin recovery procedures after receiving flight training in those training areas in an aircraft, as appropriate, that is certificated for spins; and

(ii) demonstrate instructional proficiency in stall awareness, spin entry, spins and spin recovery procedures;

(h) log at least 15 hours as PIC in the category, class and type of aircraft that is appropriate to the flight instructor rating sought; and

(i) comply with the appropriate regulations that apply to the flight instructor rating sought.

(2) For the purpose of sub regulation (1) (g) (ii), the Authority may accept the endorsement specified in paragraph (g) (i) as satisfactory evidence of instructional proficiency in stall awareness, spin entry, spins and spin recovery procedures for the practical test, provided that the practical test is not a retest as a result of the applicant failing the previous test for deficiencies in those knowledge or skill areas.

(3) If the retest referred to in sub-regulation (2) is the result of deficiencies in the ability of an applicant to demonstrate the requisite knowledge or skill, the applicant shall demonstrate the knowledge and skill to an examiner in an aircraft, as appropriate, that is certificated for spins.

77. Aeronautical knowledge requirements.

(1) The applicant shall ensure that he or she meets the knowledge requirements for the issue of a commercial pilot licence as prescribed in regulation 43 as appropriate.

(2) In addition to the requirements of sub-regulation (1), the applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a flight instructor rating, in 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) student evaluation and testing and training philosophies;

(f) training programme development;

(g) lesson planning;

(h) classroom instructional techniques;

(i) use of training aids;

(j) analysis and correction of student errors;

(k) human performance relevant to flight instruction; and

(l) hazards involved in simulating system failures and malfunctions in the air.

78. Aeronautical experience.

(1) An applicant for a flight instructor rating shall meet the experience requirements for the issue of a commercial pilot licence as prescribed in regulation 45.

(2) An applicant for a flight instructor rating shall demonstrate, in the category 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.

79. Instruction requirements.

An applicant for a flight instructor rating shall, under the supervision of an authorised flight instructor-

(a) receive instruction of not less than 20 hours in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and

(b) practise instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

80. Trainees records.

A holder of a flight instructor rating shall—

(a) sign the logbook or any other approved record keeping document of each person to whom that instructor has given flight training or ground training;

(b) maintain a record in a logbook or a separate document that contains the following-

(i) the name of each person whose logbook that instructor has endorsed for solo flight privileges, and the date of the endorsement; and

(ii) the name of each person that instructor has endorsed for a knowledge test or practical test and a record of the kind of test, the date and the results.

(c) retain the records required by this regulation for three years from the date of giving the flight training or ground training.

81 Additional category.

An applicant for an additional category flight instructor rating shall meet the eligibility requirements listed in regulation 76 that apply to the flight instructor rating sought.

82. Privileges.

(1) A flight instructor shall have the following privileges—

(a) to supervise student pilots on solo flights;

(b) to carry out flight and ground instructions for the issue or renewal of—

(i) a private pilot licence;

(ii) a commercial pilot licence;

(iii) an instrument rating; and

(iv) a flight instructor rating.

(2) To exercise the privileges in sub-regulation (1), a flight instructor shall—

(a) hold a licence and rating for which instruction is to be given in the appropriate aircraft category;

(b) hold a licence and rating necessary to act as the pilot-in-command of the aircraft on which the instruction is to be given; and

(c) have the flight instructor privileges entered on the licence.

(3) A flight instructor shall not carry out instruction on a flight simulation training device required for the issue of a pilot licence or rating unless the person—

(a) holds or has held an appropriate licence;

(b) has appropriate flight training and flight experience; and

(c) has received proper authorisation from Authority.

83. Limitations and qualifications.

(1) A holder of a flight instructor rating shall observe the limitations and qualifications specified in this regulation.

(2) In any twenty four consecutive-hour period, a flight instructor may not conduct more than 8 hours of flight training.

(3) A flight instructor shall not conduct flight training in any aircraft for which the flight instructor does not hold—

(a) a valid pilot licence with the applicable category, class rating and flight instructor rating;

(b) if appropriate, a type-rating;

(c) for instrument flight training or for training for a type rating not limited to visual flight rules (VFR), an appropriate instrument rating on his or her pilot licence and flight instructor rating.

(4) A flight instructor shall not endorse—

(a) a student pilot's logbook for solo flight privileges, unless that flight instructor has—

(i) given that student the flight training required for solo flight privileges required under these Regulations;

(ii) determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student's logbook that the instructor considers necessary for the safety of the flight;

(iii) given the student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown; and

(iv) endorsed the student pilot's logbook for the specific make and model aircraft to be flown;

(b) a student pilot's logbook for a solo cross-country flight, unless the flight instructor has determined that—

(i) the student's flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight; and

(ii) the student has the appropriate solo cross-country endorsement for the make and model of aircraft to be flown;

(c) a logbook of a pilot for a flight check-out, unless that instructor has conducted a review of that pilot in accordance with the requirements of regulation 24; and

(d) a logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of Civil Aviation (Operation of Aircraft) Regulations, 2014.

(5) A flight instructor shall not give training required for the issue of a licence or rating in a multiengine aeroplane or helicopter unless that flight instructor has at least five flight hours of PIC time in the specific make and model of multiengine aeroplane or helicopter.

(6) A flight instructor shall not provide instruction to a pilot to qualify for a flight instructor rating unless that flight instructor-

(a) holds an appropriate valid flight instructor rating and has exercised the privileges of that rating within the last twenty four months;

(b) has given 200 hours of flight training as a flight instructor in the relevant aircraft category; and

(c) in the case of glider rating, has given at least 80 hours of flight training as a flight instructor in gliders.

84. Renewal requirements.

A flight instructor rating may be renewed if the applicant-

(a) passes a practical test for—

(i) renewal of the flight instructor rating;

(ii) an additional flight instructor privileges; or

(b) presents to the Authority-

(i) a record of training students that shows that within twelve months preceding the date of application for renewal of the rating, the flight instructor endorsed at least five students for a practical test for a licence or rating and at least eighty percent of those students passed that test on the first attempt; or

(ii) a record that shows that within the preceding twelve months, the flight instructor performed as a flight instructor or company check pilot and has logged not less than 20 instructional hours.

(iii) a certificate showing that the applicant has successfully completed an approved flight instructor refresher course consisting of ground training or flight training or both within the ninety days preceding the date of the expiry of the flight instructor rating.

85. Renewal of an expired flight instructor rating.
A holder of an expired flight instructor rating shall be required by the Authority to pass a flight instructor's practical test in order to renew the expired flight instructor rating.

Flight Examiner Authorisation

86. Flight examiner requirements.
(1) A flight examiner shall hold—

(a) a licence and rating for which he or she is authorised to conduct skill tests or proficiency checks; and

(b) appropriate flight instructor ratings for skill tests.

(2) A pilot shall log 1000 hours of flight time and shall provide 200 hours of flight instruction in order to qualify for a flight examiner's authorisation.

(3) The ground, flight and synthetic flight training for examiner shall include the subjects listed in regulation 77.

(4) In order to qualify for a flight examiner's authorisation, a pilot shall conduct at least one skill test under the observation by the Authority, in the role of an examiner for which authorisation is sought, including briefing, conduct of the skill test, assessement of the applicant to whom the skill test is given, debriefing and recording or documentation.

(5) Subject to compliance with the requirements specified in these Regulations, the privileges of the examiner's authorisation are to conduct skill tests and proficiency checks for a licence and ratings.

87. Flight examiner training requirements.

(1) The ground training for examiners shall include—

(a) examiner duties, functions and responsibilities;

(b) applicable regulations and procedures;

(c) appropriate methods, procedures and techniques for conducting the required tests and checks;

(d) proper evaluation of student performance including the detection of—

(i) improper and insufficient training; and

(ii) personal characteristics of an applicant that could adversely affect safety;

(e) appropriate corrective action in the case of unsatisfactory tests and checks; and

(f) approved methods, procedures and limitations for performing the required normal, abnormal and emergency procedures in the aircraft.

(2) The flight training shall include—

(a) training and practice in conducting flight evaluation from the left and right pilot seats for pilot examiners in the required normal, abnormal and emergency procedures to ensure competence to conduct the flight tests and checks;

(b) the potential results of improper, untimely or non-execution of safety measures during an evaluation; and

(c) the safety measures to be taken from either pilot seat for pilot check examiners for emergency situations that are likely to develop during an evaluation.

(3) The flight training for examiners in synthetic flight trainer shall include—

(a) training and practice in conducting flight checks in the required normal, abnormal and emergency procedures to ensure competence to conduct the evaluations tests and checks required under these Regulations; and

(b) training in the operation of synthetic flight trainer to ensure competence to conduct the evaluations required under these Regulations.

PART VIII—LICENCES FOR FLIGHT CREWMEMBERS OTHER THAN PILOTS

Flight Engineer Licence

88. Licences and ratings required.
A person shall not act as a flight engineer of an aircraft registered in Uganda unless that person holds a flight engineer licence with appropriate ratings.

89. General eligibility requirements.
An applicant for a flight engineer licence shall—

(a) be at least eighteen years of age;

(b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the First Schedule to these Regulations;

(c) comply with the requirements of these Regulations that apply to the rating sought; and

(d) possess a valid Class 2 Medical Certificate issued under these Regulations.

90. Additional aircraft ratings.
An applicant for an additional aircraft class, category or type rating flight engineer licence shall be required by the Authority to—

(a) pass the knowledge test and practical test that is appropriate to the class category or type of aircraft for which an additional rating is sought; and

(b) satisfactorily complete an approved flight engineer training program that is appropriate to the additional class rating sought.

91. Knowledge requirements.

(1) An applicant for a flight engineer licence shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a flight engineer licence and shall be required by the Authority to pass a knowledge test on the following subjects—

(a) air law: rules and regulations relevant to the holder of a flight engineer licence, rules and regulations governing the operation of aircraft pertinent to the duties of a flight engineer;

(b) aircraft general knowledge—

(i) basic principles of powerplants, gas turbines or piston engines, characteristics of fuels, fuel systems including fuel control, lubricants and lubrication systems, afterburners and injection systems, function and operation of engine ignition and starter systems;

(ii) principles of operation, handling procedures and operating limitations of aircraft powerplants, effects of atmospheric conditions on engine performance;

(iii) airframes, flight controls, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life, identification of structural damage and defects;

(iv) ice and rain protection systems;

(v) pressurisation and air-conditioning systems, oxygen systems;

(vi) hydraulic and pneumatic systems;

(vii) basic electrical theory, electric systems (AC and DC), aircraft wiring systems, bonding and screening;

(viii) principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, displays and avionics;

(ix) limitations of appropriate aircraft;

(x) fire protection, detection, suppression and extinguishing systems; and

(xi) use and serviceability checks of equipment and system of appropriate aircraft;

(c) flight performance and planning—

(i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations; and

(ii) use and practical application of performance data including procedures for cruise control;

(d) human performance—
human performance relevant to the flight engineer including principles of threat and error management;

(e) operational procedures—

(i) principles of maintenance, procedures for the maintenance of airworthiness, defect reporting, pre-flight inspections, precautionary procedures for fuelling and use of external power, installed equipment and cabin systems;

(ii) normal, abnormal and emergency procedures; and

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

(f) principles of flight: fundamentals of aerodynamics;

(g) radiotelephony: radiotelephony procedures and phraseology;

(h) fundamentals of navigation; principles and operation of self-contained systems; and

(i) operational aspects of meteorology.

(2) The validity of the knowledge test results for an applicant for a flight engineer's licence shall be eighteen months after passing the examination.

92. Aeronautical experience requirements.

(1) Except as otherwise specified in this regulation, an applicant for a flight engineer licence shall obtain and log the flight time used to satisfy the aeronautical experience requirements of sub-regulation (2) on an aeroplane on which a flight engineer is required by these Regulations.

(2) An applicant for a flight engineer licence with a type rating shall present, for the type rating sought, satisfactory evidence of one of the following, including the practical experience with the aircraft described in sub-regulation (1)—

(a) at least three years of practical experience in aircraft maintenance and at least 5 hours of flight training in the duties of a flight engineer;

(b) graduation from at least a two and half-years specialised aeronautical training course in aircraft maintenance and at least six months of practical experience in maintaining aircraft and aircraft engines and at least 5 hours of flight training in the duties of a flight engineer;

(c) a degree in aeronautical or avionics engineering from a college, university or engineering school acceptable to the Authority at least one year of practical experience in aircraft maintenance and at least 5 hours of flight training in the duties of a flight engineer;

(d) a degree in electrical or mechanical engineering from a college, university or engineering school acceptable to the Authority at least one year of practical experience in aircraft maintenance and at least 5 hours of flight training in the duties of a flight engineer;

(e) at least a CPL with an instrument rating and at least 5 hours of flight training in the duties of a flight engineer;

(f) at least two hundred hours of flight time in a transport category aeroplane as PIC or a co-pilot performing the functions of a PIC under the supervision of a PIC;

(g) not less than one hundred hours of flight time as a flight engineer; or

(h) within the ninety-day period before the application, successful completion of an approved flight engineer ground and flight course.

(3) The applicant for a flight engineer licence shall have operational experience in the performance of the duties of a flight engineer, under the supervision of a flight engineer approved by the Authority for that purpose, in at least the following areas—

(a) normal procedures—

(i) pre-flight inspections;

(ii) fuelling procedures and fuel management;

(iii) inspection of maintenance documents;

(iv) normal flight deck procedures during all phases of flight;

(v) crew coordination and procedures in case of crew incapacitation;

(vi) defect reporting.

(b) abnormal and alternate (standby) procedures—

(i) recognition of abnormal functioning of aircraft systems;

(ii) use of abnormal and alternate (standby) procedures.

(c) emergency procedures—

(i) recognition of emergency conditions;

(ii) use of appropriate emergency procedures.

93. Skill requirements.

(1) An applicant for a flight engineer licence with a type rating shall—

(a) pass a practical test on the duties of a flight engineer in the type of aircraft for which a rating is sought or an approved synthetic flight trainer replicating such an aircraft;

(b) show satisfactory performance in pre-flight inspection, servicing, starting, pre-takeoff and post-landing procedures;

(c) while in-flight, show satisfactory performance of the normal duties and procedures relating to the aeroplane, aeroplane engines, propellers, if appropriate, systems and appliances; and

(d) while in-flight, in a synthetic flight trainer or in an approved training device, show satisfactorily performance on emergency duties and procedures and recognise and take appropriate action for malfunctions of the aeroplane, engines, propellers, if appropriate, systems and appliances.

(2) An applicant for a flight engineer licence shall demonstrate the ability to perform as flight engineer of an aircraft, the duties and procedures described in regulation 92(3) with a degree of competency appropriate to the privileges granted to the holder of a flight engineer licence and to—

(a) recognise and manage threats and errors;

(b) use aircraft systems within the aircraft's capabilities and limitations;

(c) exercise good judgement and airmanship;

(d) apply aeronautical knowledge;

(e) perform all the duties as part of an integrated crew with the successful outcome assured; and

(f) communicate effectively with the other flight crew members.

94. Privileges and limitations.
A holder of a flight engineer licence may-

(a) act as flight engineer of any type of aircraft on which the holder is rated;

(b) be authorised to act as a flight engineer instructor for issue or renewal of flight engineer licences or ratings; and

(c) exercise all the privileges of the holder of a flight radiotelephone operator licence as stipulated in regulation 129.

95. Renewal requirements.
A holder of a Flight Engineer Licence may apply for renewal of the licence if the holder has logged not less than 6 hours as Flight Engineer within the six months preceding the date of application for renewal.

PART IX—LICENCES, CERTIFICATES, RATINGS AND AUTHORISATIONS FOR PERSONNEL OTHER THAN FLIGHT CREW MEMBERS.

Air Traffic Controller Licence

96. Required licences and ratings or qualifications.
(1) A person shall not act as an Air Traffic Controller (ATC) unless that person holds an air traffic controller licence issued under these Regulations.

(2) A licence to act as an air traffic controller shall include-

(a) one or more ratings as specified in regulation 5(4) specifying the type of air traffic control service which the holder of the licence is competent to provide; and

(b) a list of the places at which, and the type of radar equipment, if any, with the aid of which the licence holder may provide the service.

(3) Where during a continuous period of six months the holder of an air traffic controller licence has not at any time provided at a particular place the type of air traffic control service specified in the rating, the rating shall cease to be valid for that place at the end of the six months period.

(4) Where a rating for a specified place ceases to be valid in accordance with sub regulation (3), the holder of the air traffic controller licence shall immediately inform the Authority to that effect and shall forward the licence to the Authority to enable the licence to be endorsed accordingly.

97. General eligibility requirements.

An applicant for an air traffic controller licence shall—

(a) be at least 21 years of age;

(b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations without impediment of speech that would interfere with two way radio conversation;

(c) comply with the knowledge requirements of regulations 98 and 100; and

(d) hold a current Class 3 Medical Certificate.

98. Knowledge requirements for an issue of ATC licence.

(1) An applicant for an air traffic controller licence shall receive and pass an approved training course in air traffic control conducted at an approved training organisation in at least the following subjects—

(a) air law - rules and regulations relevant to the air traffic controller;

(b) air traffic control equipment - principles, use and limitations of equipment used in air traffic control;

(c) general knowledge - principles of flight; principles of operation and functioning of aircraft, powerplants and systems; aircraft performances relevant to air traffic control operations;

(d) human performance - human performance relevant to air traffic control;

(e) language - the language or languages nationally designated for use in air traffic control and ability to speak such language or languages without accent or impediment which would adversely affect radio communication;

(f) meteorology - aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety and altimetry;

(h) navigation - principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and

(i) operational procedures - air traffic control, communication, radiotelephony and phraseology procedures (routine, non routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

(2) The applicant shall undergo the actual control of air traffic under the supervision of an appropriately rated air traffic controller and acquired experience for the rating sought as specified in regulation 99.

(3) The validity of the knowledge test results for an applicant for an air traffic controller licence shall be eighteen months after passing the test.

99. Knowledge requirements for air traffic controller ratings. The ratings and knowledge requirements for air traffic controller shall be as follows—

(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 rating—

(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

(vii) emergency and search and rescue plans;

(c) approach control surveillance, approach precision radar control, area control procedural rating and radar control surveillance ratings—

an applicant shall meet the requirements specified in paragraph (b) insofar as they affect the area of responsibility and shall demonstrate a level of knowledge appropriate to the privileges granted, in at least the following additional subjects—

(i) principles, use and limitations of radar, other surveillance systems and associated equipment; and

(ii) procedures for the provision of approach, precision approach or area radar control services including procedures to ensure appropriate terrain clearance;

(d) approach precision radar control rating; not less than 200 precision approaches of which not more than 100 shall be carried out on a radar simulator approved for that purpose by the Authority and not less than 50 of those precision approaches shall be carried out at the unit and on the equipment for which the rating is sought;

(e) area control procedural rating; to provide or supervise the provision of area control service within the control area or portion for which the licence holder is rated; and

(f) area control surveillance rating: to provide and supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion, for which the licence holder is rated.

100. Aeronautical experience and skill requirements for air traffic controller ratings.

(1) The applicant shall complete an approved training course and 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 and acquire experience for the rating sought as follows—

(a) aerodrome control rating: an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought;

(b) approach control rating: an approach control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought;

(c) approach radar control rating: an approach radar control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought;

(d) approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall be carried out on a radar simulator approved for that purpose by the Authority, not less than 50 of those precision approaches shall be carried out at the unit and on the equipment for which the rating is sought;

(e) area control rating: an area control service, 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

(f) area radar control rating: an area radar control service, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought

Provided that—

(i) the experience specified in this sub-regulation shall be completed within the 6 months period immediately preceding application;

(ii) where the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, the Authority shall determine whether the experience requirement can be reduced, and if so, to what extent; and

(iii) if the privileges of the approach radar control rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator (PPI) 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 approach radar controller.

(2) The experience requirements specified for air traffic controller ratings in regulation 99 may be credited as part of the experience specified in this regulation.

(3) Concurrent issuance of two air traffic controller ratings: when two air traffic controller ratings are sought concurrently, the Authority

shall determine the applicable requirements on the basis of the requirements for each rating and these requirements shall not be less than those of the more demanding rating.

101. Privileges of air traffic controller ratings.

(1) Subject to sub-regulation (2) a holder of an air traffic controller licence which includes ratings of two or more of the classes specified in sub-regulation (2) shall not at any one time perform the function specified in respect of more than one of these ratings.

(2) The functions of any one of the following groups of ratings may be exercised at the same time—

(a) the aerodrome control rating and the approach control rating;

(b) approach control rating and the approach radar control rating; except that the functions of the approach radar control rating shall not be exercised at the same time as the functions of the approach radar control rating if the service being provided under the approach radar control is a surveillance radar approach terminating at a point less than two nautical miles from the point of intersection of the glide path with the runway, the two functions shall not be exercised at the same time;

(c) the area control rating and the area radar control rating; or

(d) by an aerodrome control tower or area control centre when it is necessary or desirable to combine under the responsibility of one unit of the functions of the approach control service with those of the aerodrome control service or area control service.

102. Privileges of air traffic controller ratings.

(1) The privileges of the holder of an air traffic controller licence endorsed with one or more of the following ratings shall be—

(a) aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the licence holder is rated;

(b) approach control rating: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion of the airspace, under the jurisdiction of the unit providing approach control service;

(c) approach radar control rating: to provide or supervise the provision of approach control service with the use of radar or other surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or of the airspace, under the jurisdiction of the unit providing approach control service; and incase the holder complies with the rating 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) area control rating: to provide or supervise the provision of area control service within the control area or portion of the control area, for which the licence holder is rated;

(f) area radar control rating: to provide or supervise the provision of area control service with the use of radar, within the control area or portion of the control area, for which the licence holder is rated.

(2) Before exercising the privileges indicated in sub-regulation (1), the air traffic controller licence holder shall familiarise himself or herself with all pertinent and current information and shall indicate by signing his or her name indicating the time in Universal Time Co-ordinated (UTC) in the appropriate air traffic controller log book.

(3) The holder of an air traffic controler licence shall not provide instruction in an operational environment except as authorised in writing by the Authority.

103. Validity of air traffic controller ratings.
An air traffic controller rating becomes invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period of six months and shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.

104. Maximum working hours.
(1) Except in an emergency, a licensed air traffic controller shall not perform any duties for twenty four consecutive hours during each seven consecutive days.

(2) An air traffic controller may not serve or be required to serve—

(a) for more than ten consecutive hours; or

(b) for more than ten hours during a period of twenty four consecutive hours, unless the air traffic controller has had a rest period of at least eight hours at or before the end of the ten hours of duty.

105. Responsibilities over fatigue.
A person holding an air traffic controller licence shall not act as an air traffic controller nor shall an employer allow a licensed controller, if the controller or the employer knows or suspects that the controller is suffering from or, having regard to the circumstances of the period of duty to be undertaken, is likely to suffer from, such fatigue as may endanger the safety of any aircraft to which an air traffic control service may be provided.

106. Prohibition of unlicensed air traffic controllers.
(1) An air traffic controller shall not provide any type of air traffic service at any aerodrome at which air traffic control service is required to be provided under the Civil Aviation (Rules of the Air and Air Traffic Control) Regulations, 2014 or at any other place, not being an aerodrome, at which air traffic control service is provided, whether or not under the direction of the Authority, unless he does so in accordance with the terms of—

(a) a valid air traffic controller licence so granted authorising air traffic controller to provide that type of service at that aerodrome or other places;

(b) a valid air traffic controller licence which does not authorise the air traffic controller to provide that type of service at the aerodrome or other place, but he or she is supervised by a person who is present at the time and who is the holder of a valid air traffic controller licence so granted which authorises him or her to provide at that aerodrome or other place the type of air traffic control service which is being provided; or

(c) the air traffic controller's appointment as an air traffic controller trainee and he is supervised by a person who is present at the time and who is the holder of a valid air traffic controller's licence so granted which authorises him or her to provide that type of service at any aerodrome or at a place at which air traffic control service is provided—

Provided that the air traffic controller licence shall not be required by any person who acts in the course of his or her duty as a member of the Uganda military or a visiting force.

(2) A holder of an air traffic controller licence shall not perform any of the functions specified in regulation 100 in respect of a rating at any of the places referred to in sub-regulation (1) unless—

(a) his or her licence includes that rating and the rating is valid for the place at which and the type of radar equipment, if any, with the aid of which functions are performed; or

(b) he or she is supervised by a person who is present at the time and who is the holder of a valid air traffic controller's licence granted under these Regulations which authorises him or her to provide at that aerodrome or other place the type of air traffic control service which is being provided.

(3) Nothing in this regulation shall prohibit a holder of a valid air traffic controller licence from providing at any place for which the licence includes a valid rating, information to aircraft in flight in the interests of safety.

107. Renewal requirements.
An air traffic controller licence may be renewed if the holder demonstrates, at a level appropriate to the privileges being renewed, the skill, judgement and performance required to provide a safe, orderly and expeditious control service within six months preceding the date of application for renewal.

Ground Instructor Licence

108. Eligibility requirements.

(1) An applicant for a ground instructor licence shall—

(a) be at least eighteen years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations;

(c) pass a knowledge test on the fundamentals of instructing including—

(i) the learning process;

(ii) elements of effective teaching;

(iii) student evaluation and testing;

(iv) course development;

(v) lesson planning;

(vi) classroom training techniques;

(vii) techniques of applied instructions;

(viii) use of training aids;

(ix) analysis and correction of student errors; and

(x) human performance relevant to ground instruction;

(d) pass a knowledge test on the aeronautical knowledge areas specified in regulations 37, 43 and 49.

(2) A ground instructor licence shall be issued with either one of the following ratings—

(a) basic;

(b) advanced;

(c) instrument; or

(d) a combination of (a) and (c) or (b) and (c).

(3) The knowledge test specified in sub-regulation (1) (c) is not required if the applicant holds a flight instructor rating issued under these Regulations.

(4) The knowledge test results for a ground instructor licence shall be valid for eighteen months after passing the examination.

109. Privileges.

(1) A holder of a ground instructor licence may exercise the privileges appropriate to the rating as follows—

(a) for a holder of a basic ground instructor rating—

(i) ground training in the aeronautical knowledge areas required for the issue of a private pilot licence (PPL) or associated ratings;

(ii) ground training required for a private pilot flight check-out; and

(iii) a recommendation for a knowledge test required for the issuance of a PPL;

(b) for a holder of an advanced ground instructor rating—

(i) ground training in the aeronautical knowledge areas required for the issue of any pilot licence or rating;

(ii) ground training required for any flight check out; and

(iii) a recommendation for a knowledge test required for the issue of any licence;

(c) for a holder of an instrument ground instructor rating-

(i) ground training in the aeronautical knowledge areas required for the issue of an instrument rating;

(ii) ground training required for an instrument proficiency check; and

(iii) a recommendation for a knowledge test required for the issue of an instrument rating.

(2) A person who holds a ground instructor licence shall be authorised, within the limitations of the ratings on the ground instructor licence, to endorse the logbook or other training record of a person to whom the holder has provided the training or recommendation specified in sub-regulation (1).

110. Requirements for ratings.
An applicant for a ground instructor licence is required to hold or have held a Commercial Pilot Licence (CPL) or Airline Transport Pilot Licence (ATPL) or pass the following—

(a) basic ground instructor rating: aeronautical knowledge requirements for CPL as prescribed in regulation 43;

(b) advanced ground instructor rating;

(c) aeronautical knowledge requirements for ATPL as prescribed in regulation 49;

(d) instrument ground instructor rating—

(i) meet the requirements of either (a) or (b) and in addition the instrument rating knowledge requirements as prescribed in regulation 71; and

(ii) be a holder of a valid instrument rating.

111. Renewal requirements.
A holder of a ground instructor licence shall not perform the duties of a ground instructor unless within the twelve preceding months the person has served for three months as a ground instructor.

112. General eligibility requirements.
An applicant for a flight operations officer licence shall—

(a) be at least twenty one years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language in accordance with the language proficiency requirements contained in the Second Schedule to these Regulations; and

(c) comply with the knowledge requirements, experience or training requirements and skill requirements for flight operations officer as contained in these Regulations.

113. Knowledge requirements.
An applicant for a flight operations officer licence shall be required by the Authority to pass a knowledge test covering the following areas—

(a) air law—
rules and regulations relevant to the holder of a flight operations officer licence and appropriate air traffic services practices and procedures;

(b) aircraft general knowledge—

(i) principles of operation of aeroplane, powerplants, systems and instruments;

(ii) operating limitations of aeroplanes and powerplants; and

(iii) minimum equipment list;

(c) flight performance calculation and planning procedures—

(i) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;

(ii) operational flight planning, fuel consumption and endurance calculations, alternate airport selection procedures, en-route cruise control and extended range operation;

(iii) preparation and filing of air traffic services flight plans; and

(iv) basic principles of computer-assisted planning systems.

(d) human performance—
human performance relevant to dispatch duties;

(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) interpretation and application of aeronautical meteorological reports, charts and forecasts, codes and abbreviations, use of and procedures for obtaining, and meteorological information.

(f) navigation—

(i) pinciples of air navigation with particular reference to instrument flight;

(g) operational procedures—

(i) use of aeronautical documentation;

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

(iii) procedures relating to aircraft accidents and incidents and emergency flight procedures; and

(iv) procedures relating to unlawful interference and sabotage of aircraft;

(h) principles of flight—
principles of flight relating to the appropriate category of aircraft;

(i) radio communication—
procedures for communicating with aircraft and relevant ground stations.

(2) The knowledge test results for a flight operations officer licence shall be valid for eighteen months after passing the examination.

114. Experience or training requirements.
An applicant for a flight operations officer licence shall present documentary evidence satisfactory to the Authority that the applicant has the experience or training as follows—

(a) a total of two years' service in any one or in any combination of the capacities specified in sub-paragraph (i), (ii), (iii), provided that in any combination of experience the period served in any capacity shall be at least one year—

(i) a flight crewmember in commercial air transport;

(ii) a meteorologist in an organisation dispatching aircraft in commercial air transport;

(iii) an air traffic controller or technical supervisor of flight operations officer or air transportation flight operations systems; or

(b) at least one year as an assistant in the dispatching or aircraft used in commercial air transport; or

(c) has satisfactorily completed an approved course training in a flight operations.

(2) An applicant shall serve under the supervision of a flight operations officer for at least ninety days within the six months immediately preceding the application.

115. Skill requirements.
An applicant for a flight operations officer licence shall demonstrate the ability to—

(a) make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports;

(b) provide an operationally valid briefing on weather conditions prevailing in the general neighbourhood 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; and

(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.

116. Privileges.
Subject to compliance with the requirements set forth in these Regulations, the privileges of a holder of a flight operations officer licence shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements specified in the Civil Aviation (Operation of Aircraft) Regulations, 2014.

117. Renewal requirements.
A flight operations officer licence may be renewed if the holder has performed his or her duties in the six months preceding the date of application for renewal exercising the privileges of the licence.

Aircraft Maintenance Engineer Licence

118. General eligibility requirements.
(1) An applicant for a grant of an Aircraft Maintenance Engineer Licence (AMEL) shall—

(a) be at least eighteen years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language;

(c) have completed an approved training in accordance with Approved Training Organisation or Approved Maintenance Training programme;

(d) comply with the knowledge, experience and competency requirements prescribed for the rating sought; and

(e) pass all of the prescribed examinations for the rating sought, within twelve months preceding the date of filing the application.

(2) A Licensed Aircraft Maintenance Engineer (LAME) who applies for an additional rating shall meet the requirements of regulation 120.

119. Aeronautical knowledge and skill requirements.

(1)An applicant for an aircraft maintenance engineers' licence shall demonstrate the level of knowledge and skill in the subjects as provided in the Fifth Schedule to these Regulations.

(2) The knowledge test results for an aircraft maintenance engineer's licence shall be valid for twelve months after passing the examination.

120. Experience requirements for licence with or without type rating

(1) Except as specified in sub-regulation (2) applicants for the issue or extension of a licence in categories A, C, X and R shall show confirmed minimum specific periods of aircraft maintenance engineering experience totalling 3 years.

(2) An applicant for Category 'X' – Compass Compensation and Adjustment shall hold a Licence Without Type Ratings (LWTR) in both Categories 'A' and 'C' or 'X' or 'R' and shall have a minimum of six months engineering experience relating to the maintenance of operating aircraft in the two years preceding the date of application with a minimum of six compass swings.

(3) An applicant must demonstrate the following minimum experience gained while maintaining operating aircraft and not in component workshops or on static or non-flying aircraft:

(a) for a Category ‘A’ or ‘C’ LWTR, twenty four months relating to Airframe or Engine maintenance, twelve months of which shall be in the two years immediately preceding the date of application; or

(a) for any Category ‘R’ or ‘X’ LWTR (excluding Category ‘X’ – Compass Compensation and Adjustment), twenty four months related to avionic systems, twelve months of which must be in the two years immediately preceding the date of application; and

(b) six months, within the twelve months referred to in (a) and (b), relevant to the specific LWTR for which application is being made.

(4) Where an applicant for category ‘X’ electrical holds a valid licence which includes both Category ‘A’ and Category ‘C’ LWTR sub divisions, the experience in sub-regulation (3) (b) need not be complied with and the applicant need show only the six months experience relevant to the LWTR required in sub-regulation 3(c).

(5) An applicant for a LWTR in one category holding a valid licence in another category the experience requirement of sub-regulation (3)(a) and (3)(b) may be reduced dependent on the total practical experience accumulated while holding that licence and training attended but in any case shall demonstrate the experience requirements of sub-regulation 3(c). Any of the periods specified above may be concurrent.

(6) Subject to sub-regulation (7) extension of a licence to include a type rating—

(a) shall not require a period of general experience additional to that required for the relevant LWTR, which must be held before a type rating is granted; and

(b) shall require satisfactory record of experience, gained within the three years before the application, appropriate to the type rating sought.

(7) An applicant for a type rating from a holder of a LWTR which was gained following successful completion of an approved initial course shall show confirmed evidence that he has obtained at least twelve months relevant aircraft engineering experience with an organisation engaged in the maintenance of operational aircraft in addition to that gained during the course.

121. Privileges and limitations.

(1) Except as specified in sub-regulations (4) and (5), a holder of an aircraft maintenance engineer licence (AMEL) may perform or supervise the maintenance, preventive maintenance or modification of or after inspection, approve for return to service, any aircraft, airframe, aircraft engine, propeller, appliance, component or part thereof, for which the holder of an AMEL is rated, provided the holder has—

(a) satisfactorily performed the work at an earlier date;

(b) demonstrated the ability to perform the work to the satisfaction of the Authority;

(c) received training acceptable to the Authority on the tasks to be performed;

(d) performed the work while working under the direct supervision of a hoder of an AMEL or an aviation repair specialist who is appropriately authorised and has—

(i) previous experience in the specific operation concerned; or

(ii) received training acceptable to the Authority on the task to be performed.

(2) Except as specified in sub-regulation (4) and (5), a holder of an AMEL with an airframe rating may, after he or she has performed the inspection required by the Civil Aviation (Operation of Aircraft) Regulations, 2014 on an airframe or any related part or appliance, approve and return the airframe or any related part or appliance to service.

(3) Except as specified in sub-regulations (4) and (5), a holder of an AMEL with an engine rating may perform the inspection required by the Civil Aviation (Operation of Aircraft) Regulations, 2014 on an engine or propeller or any related part or appliance and approve and return the airframe or any related part or appliance to service.

(4) Except as specified in sub-regulation (5) a holder of an AMEL with a radio, electrical, instruments, auto-pilot and compass rating may inspect, repair, maintain, function, test and return to service aircraft radio, electrical, instruments and compass systems and components respectively.

(5) A holder of an AMEL with an airframe, engine or radio, electrical, instruments and compass rating shall not supervise the maintenance, preventive maintenance or modification of or approve and return to service, any aircraft, airframe, engine, propeller, appliance, component or part thereof, for which the holder of an AMEL is rated unless the holder has satisfactorily performed the work concerned at an earlier date.

(6) When an Authority authorises an approved maintenance organisation to appoint non-licensed personnel to exercise the privileges of regulation 121(1) – (5), the person appointed shall meet the requirements specified in regulation 119 and 120.

122. Recency and renewal requirement.

(1) A holder of an Aircraft Maintenance Engineers Licence shall apply for renewal of licence at least two months before the expiry period in a form and manner prescribed by the Authority.

(2) The holder shall perform work comparable with that required for the grant of the licence for periods totaling at least six months during the twenty four months preceding the date of the expiry of the licence.

(3) A person who fails to renew his or her licence after the expiry period may do so within the next twelve months provided that he or she proves that he has been continuously engaged in practical work for the entire extended period.

(4) A person who does not apply for a renewal within the extended period as provided for in sub-regulation (3) or fails to prove that he or she has continuously been engaged in practical work during that period will be required to sit for an exam before his licence is renewed.

(5) A holder of an aircraft maintenance engineer's licence shall not exercise the privileges of the licence unless the licence is kept valid as prescribed by the Authority.

Aviation Repair Specialist Authorisation

123. Eligibility requirements.
An applicant for an aviation repair specialist authorisation shall—

(a) be at least eighteen years of age;

(b) demonstrate the ability to read, speak, write, and understand the English language and interprete technical reports and maintenance publications and carry out technical discussions in the English language;

(c) be specially qualified to perform maintenance on aircraft or aircraft components appropriate to the job for which the aviation repair specialist was employed;

(d) be employed for a specific job requiring special qualifications by an approved maintenance organisation certificated under the Civil Aviation (Approved Maintenance Organisation) Regulations, 2014;

(e) be recommended for certification by the aviation repair specialist's employer, to the satisfaction of the Authority, as able to satisfactorily maintain aircraft or components, appropriate to the job for which the aviation repair specialist is employed; and

(f) either—

(i) have at least eighteen months of practical experience in the (a) edures, practices, inspection methods, materials, tools, machine tools, and equipment generally used in the maintenance duties of the specific job for which the person is to be employed and certificated; or

(ii) complete formal training acceptable to the Authority and specifically designed to qualify the applicant for the job for which the applicant shall be employed.

124. Privileges and limitations.

(1) An applicant for an aviation repair specialist authorisation who is employed by an approved maintenance organisation shall be concurrent with the rating issued to the approved maintenance organisation limited to the specific job for which the aviation repair specialist is employed to perform, supervise or approve for return to service.

(2) An applicant for an aviation repair specialist authorisation in respect of airframe, engine, avionics or other systems shall not be issued with that authorisation for purposes of circumventing the process of obtaining an aircraft maintenance engineer licence (AMEL).

(3) An aviation repair specialist may perform or supervise the maintenance, preventive maintenance or alteration of aircraft, airframes, engines, propellers, appliances, components and parts appropriate to the designated speciality area for which the aviation repair specialist is or authorised and rated, but only in connection with employment by a maintenance organisation approved under the Civil Aviation (Approved Maintenance Organisation) Regulations, 2014.

(4) An aviation repair specialist shall not perform or supervise duties unless the aviation repair specialist understands the current instructions of the employing approved maintenance organisation and the instructions for continued airworthiness, which relate to the specific operations concerned

125. Display of authorisation.

A person who holds an aviation repair specialist authorisation shall keep that authorisation within the immediate area where the person normally exercises the privileges of the authorisation and shall present it for inspection upon the request of the Authority or any other person authorised by the Authority.

126. Surrender of authorisation.
A holder of an aviation repair specialist authorisation shall surrender the authorisation to the Authority when it is suspended, revoked or at the time the holder leaves the employment of the approved maintenance organisation.

Flight Radiotelephony Operator Licence

127. General eligibility requirements.
A person who is required to use radiotelephone apparatus on board an aircraft shall, except for a holder of a pilot licence, hold a flight radiotelephony operator licence.

(2) An applicant for a flight radiotelephony operator licence shall—

(a) be at least seventeen years of age;

(b) demonstrate the ability to read, speak, write and understand the English language in accordance with the language proficiency requirements contained in the Third Schedule to these Regulations;

(c) comply with the knowledge and skill requirements, for flight radiotelephone operator as contained in regulation 128; and

(d) demonstrate a level of knowledge appropriate to the privileges granted to a holder of a flight radiotelephone operator licence.

128. Skill and knowledge requirements.
(1) An applicant for a flight radiotelephony operator licence shall pass a practical and knowledge test covering the following areas—

(a) the ICAO spelling alphabet;

(b) departure and position reporting;

(c) obtaining meteorological information;

(d) transmission and procedures of distress and urgency signals;
(e) communication techniques and procedures;

(f) the necessity for brevity in radiotelephony communication and priorities;

(g) pre-flight briefing;

(h) classification of directional finding bearings;

(i) radiotelephony facilities and frequencies available in the FIR;

(j) elementary knowledge of the relationship between wavelength and frequency;

(k) radiotelephony procedures and phraseology;

(l) ability to use the radio equipment of the type installed in the aircraft; and

(m) the ability to carry out emergency procedures.

(2) The knowledge test results for a radio telephony operator licence shall be valid for twenty four months after passing the examination.

129. Privileges.
A holder of a flight radiotelephony operator licence shall have the privilege to use the radiotelephone on board an aircraft.

130. Renewal requirements.
A holder of a flight radiotelephony operator licence may apply for renewal of the licence if the holder has exercised the privileges of the licence in the six months preceding the date of application.

Cabin Crewmember Certificate

131. Required certificate, ratings and qualifications.
(1) A person shall not act as a cabin crewmember unless that person holds—

(a) a cabin crewmember certificate;

(b) a rating for the specific aircraft type or is operating under the supervision of a rated cabin crew for the purpose of qualifying for the rating;

(c) the required knowledge for the type of aircraft and operating position;

(d) the current Medical Certificate Class 2;

(2) A person undergoing training to qualify for a cabin crewmember certificate or rating shall not—

(a) form part of the required minimum number of cabin crewmember for that aircraft;

(b) be assigned to an operating position that requires a cabin crewmember.

(3) In this regulation, "operating position" means a duty station assigned to the cabin crewmember for execution of emergency duties.

132. Eligibility requirements.
An applicant for cabin crewmember certificate shall—

(a) be at least eighteen years of age;

(b) be able to read, speak and understand the English language sufficiently to adequately carry out the responsibilities of a cabin crewmember;

(c) complete a course of training approved by the Authority; and

(d) pass a knowledge test.

133. Knowledge requirements.

(1) An applicant for a cabin crewmember certificate shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a cabin crewmember certificate, in the following subjects—

(a) fire and smoke training including—

(i) emphasis on the responsibility of cabin crew to deal promptly with emergencies involving fire and smoke and in particular, emphasis on the importance of identifying the actual source of the fire;

(ii) the importance of informing the flight crew immediately, as well as the specific actions necessary for co-ordination and assistance, when fire or smoke is discovered;

(iii) the necessity for frequent checking of potential fire-risk areas including toilets and the associated smoke detectors;

(iv) the classification of fires and the appropriate type of extinguishing agents and procedures for particular fire situations, the techniques of application of extinguishing agents, the consequences of misapplication and of use in a confined space; and

(v) the general procedures of ground based emergency services at aerodromes.

(b) water survival training including the actual donning and use of personal flotation equipment in water by each cabin crewmember; before first operating on an aeroplane fitted with life-rafts or other similar equipment and training shall be given on the use of this equipment, as well as actual practice in water;

(c) survival training appropriate to the areas of operation such as polar, desert, jungle or sea;

(d) medical aspects and first aid to include –

(i) instruction on first aid and the use of first-aid kits;

(ii) first aid associated with survival training and appropriate hygiene; and

(iii) the physiological effects of flying and with particular emphasis on hypoxia;

(e) passenger handling including—

(i) advice on the recognition and management of passengers who are or become intoxicated with alcohol or are under the influence of drugs or are aggressive;

(ii) methods used to motivate passengers and the crowd control necessary to expedite an aeroplane evacuation;

(iii) regulations covering the safe stowage of cabin baggage including cabin service items and the risk of the baggage becoming a hazard to occupants of the cabin or otherwise obstructing or damaging safety equipment or aeroplane exits;

(iv) the importance of correct seat allocation with reference to aeroplane mass and balance with particular emphasis given on the seating of disabled passengers and the necessity of seating able-bodied passengers adjacent to unsupervised exits;

(v) duties to be undertaken in the event of encountering turbulence including securing the cabin;

(vi) precautions to be taken when live animals are carried in the cabin;

(vii) dangerous goods training as prescribed in Civil Aviation (Operation of Aircraft) Regulations and Civil Aviation (Air Operator Certification and Administration) Regulations, 2014; and

(viii) security procedures, including the provisions of Civil Aviation (Operation of Aircraft) Regulations and Civil Aviation (Air Operator Certification and Administration) Regulations, 2014;

(f) communication - emphasis shall be placed on the importance of effective communication between cabin crew and flight crew including technique, common language and terminology—

(i) the importance of cabin crew performing their duties in accordance with the Operations Manual;

(ii) continuing competence and fitness to operate as a cabin crewmember with special regard to flight and duty time limitations and rest requirements;

(iii) an awareness of the aviation regulations relating to cabin crewmember and the role of the Authority;

(iv) general knowledge of relevant aviation terminology, theory of flight, passenger distribution, meteorology and areas of operation;

(v) pre-flight briefing of the cabin crewmember and the provision of necessary safety information with regard to their specific duties;

(vi) the importance of ensuring that relevant documents and manuals are kept up-todate with amendments provided by the operator;

(vii) the importance of identifying when cabin crewmembers have the authority and responsibility to initiate an evacuation and other emergency procedures;

(viii) the importance of safety duties and responsibilities and the need to respond promptly and effectively to emergency situations;

(g) discipline and responsibilities; and

(h) Crew Resource Management (CRM) to include appropriate provisions of the Civil Aviation (Operation of Aircraft) Regulations, 2014 in relation to cabin crewmember.

(2) The knowledge test results for a cabin crewmember certificate shall be valid for twelve months after passing the examination.

134. Skill requirements.
An applicant for a cabin crewmember certificate shall demonstrate the ability to perform as cabin crewmember of an aircraft in the following procedures—

(a) to execute the safety duties and functions which the cabin crewmember is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;

(b) drilled and capable in the use of emergency and life saving equipment required to be carried such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment and first-aid kits;

(c) when serving on aeroplanes operated above 10,000 feet, knowledge as regards the effect of lack of oxygen and, in the case of pressurised aeroplanes, as regards physiological phenomena accompanying a loss of pressurisation;

(d) aware of other crewmembers' assignments and functions in the event of an emergency so far as is necessary for the fulfilment of the cabin crewmember's own duties;

(e) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin and has completed the dangerous goods training programme required by Civil Aviation (Operation of Aircraft) Regulations, 2014;

(f) knowledge about human performance as related to passenger cabin safety duties including flight crew-cabin crew co-ordination.

135. Privileges.
A holder of a cabin crewmember certificate may-

(a) act as a cabin crewmember in aircraft of types specified in the certificate when such aircraft is engaged in commercial transport operations; and

(b) be authorised to act as a cabin crewmember instructor for issue or renewal of cabin crew certificate and aircraft type ratings.

136. Renewal requirements.
A holder of a cabin crewmember certificate may apply for renewal if the holder has successfully completed the annual safety and emergency procedure training approved by the Authority every twelve months.

PART X—AVIATION MEDICAL STANDARDS AND CERTIFICATION.

General

137. Medical Assessment - General.
(1) The Authority may issue classes of medical assessment that are intended to indicate the minimum medical standards as follows—

(a) Class 1 applies to applicants for or holders of –

(i) Commercial Pilot Licence: aeroplanes, helicopters and powered-lift;

(ii) Airline transport Pilot Licence: aeroplanes, helicopters and powered-lift;

(iii) flight engineer licence; and

(iv) Multi-crew pilot licence: aeroplanes.

(b) Class 2 applies to applicants for or holders of—

(i) Commercial Pilot Licence: lighter-than-air;

(ii) Private Pilot Licence: aeroplanes, helicopters and glider;

(iii) Student Pilot Licence: for all aircraft and powered-lift; and

(iv) cabin crew certificate.

(c) Class 3, applies to applicants for or holders of air traffic controller licence.

(2) The Authority shall apply, as part of its state safety programme, basic safety management principles to the medical assessment process of licence holders that shall include—

(a) a routine analysis of in-flight incapacitation events and medical findings during medial assessment to identify areas of increased medical risk; and

(b) continuous re-evalution of medical assessment process to concentrate on identified areas of increased medical medical risk.

(2) Without prejudice to sub regulation (1)(a) for applicants under forty years of age, the Authority shall, at its discretion, allow medical examiners to omit certain routine examination items related to the assessement of physical fitness, whilst increasing the emphasis on health, education and prevention of ill health.

(3) The applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiners a declaration stating whether they have previously undergone such an examination and if so, the date, place and results of the last examination.

138. Aviation medical examiner, designation and qualifications.

(1) The Authority shall designate a medical doctor who meets the qualifications specified in sub-regulation (2) as an aviation medical examiner to conduct medical examinations for fitness of applicants for the issue or renewal of licences or certificates specified in these Regulations.

(2) For a medical doctor to be designated as an aviation medical examiner, he or she shall-

(a) be qualified and licenced in the practice of medicine;

(b) obtain aviation medicine training at an institution recognised by the Authority;

(c) demonstrate adequate competence in aviation medicine; and

(d) have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

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(3) A medical examiner shall receive refresher training at regular intervals as prescribed by the Authority.

139. Evaluation of medical examiner's competence.

(1) The Authority shall use the services of medical assessors to evaluate reports submitted by medical examiners and make final assessment for the issuance, renewal or denial of the medical certificates.

(2) The medical assessors shall be qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

(3) The medical assessors shall maintain the currency of their professional knowledge.

(4) The medical assessors shall periodically evaluate the competence of medical examiners to ensure that they meet applicable standards for good medical practice and aero medical risk assessment.

(5) The medical assessors shall be in charge of accredited medical conclusions.

140. Delegation of authority.

(1) The Authority may delegate to an aviation medical examiner the authority to—

(a) accept applications for physical examinations necessary for issue of a Medical Certificate under these Regulations;

(b) examine applicants for and holders of medical certificates to determine whether the applicants meet applicable medical standards; and

(c) recommend issuance, renewal, denial or withdrawal of Medical Certificates to an applicant based on meeting or failing to meet applicable medical standards.

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

Medical Certification Procedures

141. Medical records.

(1) An applicant for a medical certificate shall, in a form and manner prescribed by the Authority,

(a) sign and furnish the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history that is as complete and accurate as the applicant's knowledge permits;

(b) indicate to the medical examiner whether a medical assessment has previously been refused, revoked or suspended and if so, the reason for such refusal, revocation or suspension.

(2) Where an applicant makes a false declaration to the medical examiner, the medical examiner shall report the matter to the Authority for such action as may be considered appropriate by the Authority.

(3) Where the aviation medical examiner finds that additional medical information or history is needed, the aviation medical examiner shall request the applicant to furnish that information, or authorise any clinic, hospital, physician or other person to release to the aviation medical examiner all available information or records concerning that history.

(4) Where an applicant for a medical certificate fails within a reasonable period to provide the requested medical information or history or fails to authorise the release so requested, the Authority may deny the application as well as suspend, modify or revoke all medical certificates held by the applicant.

(5) Where a medical certificate is suspended or modified under sub-regulation (4), the suspension or modification remains in effect until—

(a) the holder provides the requested information, history, or authorisation to the Authority; and

(b) the Authority determines that the holder meets the medical standards.

142. Aviation medical examiner submission of signed medical evaluation report.

(1) An aviation medical examiner who is authorised to conduct a medical examination under regulation 141 shall—

(a) sign the required report and medical certificate and submit directly to the Authority the full details in the form and manner prescribed by the Authority;

(b) report to the Authority any individual case where in the aviation medical examiner's judgement, an applicant has failed to meet any requirement that is likely to jeopardize flight safety; and

(c) having commenced a medical evaluation of an applicant, submit to the Authority the report, whether the evaluation is terminated prior to completion, yielded sub-standard results or was completed satisfactorily.

(2) If the medical report is submitted to the Authority in electronic format, the Authority shall ensure that adequate identification of the examiner is established.

143. Issue of medical certificate.

(1) An aviation medical examiner shall issue the applicable medical certificate to any person who meets the medical standards prescribed in these regulations, based on medical examination and evaluation of the applicant's history and condition.

(2) A person shall undergo a medical examination based on the physical and mental standards contained in these Regulations to be issued with a medical certificate.

(3) If the medical examination is carried out by two or more medical examiners, the Authority shall appoint one of the medical examiner to be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness and signing the report.

(4) The medical examiner shall be required to submit sufficient medical information to the Authority to enable the Authority to audit Medical Assessments.

144. Denial of medical certificate.

(1) An applicant for a medical certificate may be denied a certificate if, upon medical examination, the applicant does not meet the physical and mental standards specified in these Regulations.

(2) The denial of the medical certificate is effective—

(a) on the date of the medical evaluation that determined the applicant did not meet the physical and mental standards specified in these Regulations; and

(b) until such time that the applicant is again determined by the Authority to be fit to exercise the privileges through—

(i) an accredited medical conclusion;

(ii) a special flight test; or

(iii) with respect to a transient condition, until a subsequent satisfactory report is acceptable to the Authority.

(2) An applicant who is denied a medical certificate by an aviation medical examiner may, within thirty days after the date of the denial, apply in writing to the Authority for reconsideration of the denial.

(3) Upon receiving an application for reconsideration, the Authority shall appoint more than one medical examiner to conduct medical examination on the applicant and shall designate one of the medical examiners to be responsible for coordinating the results of the examination, evaluation and findings with regard to medical fitness and signing the report.

(4) Where the applicant does not apply for reconsideration during the thirty day period after the date of the denial, the Authority shall consider that applicant has withdrawn the application for a medical certificate.

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

145. Medical confidentiality.

(1) Medical confidentiality shall be respected at all times and all medical reports and records shall be securely held with accessibility restricted to authorised personnel.

(2) A medical assessor shall, when justified by operational considerations, determine to what extent pertinent medical information, in addition to the information contained in the medical report submitted under regulation 144, is presented to relevant officials of the Authority.

146. Issue of medical certificate with a limitation.

(1) The Authority may issue a medical certificate with a limitation to an applicant who does not meet the applicable standards for a medical certificate if the applicant shows to the satisfaction of the Authority that—

(a) an accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety; and

(b) relevant ability, skill and experience of the applicant and operational conditions have been given due consideration.

(2) The Authority shall issue a medical limitation on a licence when the Authority or an aviation medical examiner determines the safe performance of the licence holder's duties is dependent on compliance with such a limitation.

147. Duration of medical certificate.

(1) A Class 1 Medical Certificate issued to an applicant who is—

(a) under the age of forty years shall be valid for twelve months from the day the medical examination is performed; and

(b) forty years of age or more shall be valid for six months from the day the medical examination is performed.

(2) A Class 2 Medical Certificate issued to an applicant who is-

(a) under the age of forty years shall be valid for twenty four months from the day the medical examination is performed;

(b) forty years of age or more shall be valid for twelve months from the day the medical examination is performed.

(3) A Class 3 Medical Certificate issued to an applicant who is—

(a) under the age of forty years shall be valid for twenty four months from the day the medical examination is performed; and

(b) forty years of age or more shall be valid for twelve months from the day the medical examination is performed.

148. Renewal of medical certificate.

(1) The requirements for the renewal of a medical certificate are the same as those for the initial assessment except where otherwise specifically stated.

(2) When required to obtain or renew correcting lenses, the applicant for medical examination shall advise the aviation medical examiner conducting the medical examination of the new prescription, including revised reading distances—

(a) for a Class 1 Medical Certificate, for the visual cockpit tasks relevant to the types of aircraft in which the applicant is likely to function;

(b) for a Class 2 Medical Certificate, for the visual cockpit and cabin tasks relevant to the types of aircraft in which the applicant is likely to function; and

(c) for a Class 3 Medical Certificate, for the air traffic control duties the applicant is to perform.

149. Denial of issuance of medical certificate.

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.

150. Medical requirements.

A person shall not hold or be issued a medical certificate if that person—

(a) has any organic, functional or structural disease, defect or limitation (active, latent, acute or chronic);

(b) has any wound, injury or sequelae from operation; or

(c) uses any prescribed or non-prescribed medication or other treatment that, based on the case history and appropriate qualified medical judgement relating to the condition involved, the Authority finds that the medication or treatment—

(i) makes the person unable to safely perform the duties or exercise the privileges of the licence or rating applied for or held; or

(ii) may reasonably be expected, for the maximum duration of the medical certificate applied for or held, to make the applicant unable to perform the duties or exercise the privileges of the licence or rating.

151. Physical and mental requirements.

(1) The Authority shall ensure that an applicant for a medical c ertificate is free of—

(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 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.

(2) The aviation medical examiner shall ensure that an applicant for a medical certificate is free of any disease or disability which could render the applicant likely to become suddenly unable to perform assigned duties safely and in the case of an applicant for a class 1 or 2 medical certificate, to operate an aircraft safely.

(3) The medical examiner shall ensure that the applicant does not have an established medical history or clinical diagnosis of—

(a) an organic mental disorder;

(b) a mental or behavioural disorder due to use of psychoactive substances including dependence syndrome induced by alcohol or other psychoactive substances;

(c) schizophrenia or schizotypal or delusional disorder;

(d) a mood (affective) disorder;

(e) a neurotic, stress-related or somatoform disorder;

(f) a behavioural syndrome associated with psychological 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.

152. Hearing test requirements.

(1) A person who holds or who applies to be issued a medical certificate shall be required to demonstrate a hearing performance sufficient for the safe exercise of his or her licence or rating privileges.

(2) An applicant for a medical certificate shall be tested by pure-tone audiometer at first issue for Class 1 not less than once every five years and for Class 3 not less than once every four years, up to the age of 40 years, thereafter not less than once every two years.

(3) An applicant for a Class 2 medical certificate shall be tested by pure-tone audiometry at first issue and, after the age of 50 years, not less than once every two years or other alternative methods providing equivalent results may be used.

(4) At a medical examination where audiometer is not performed, an applicant shall be tested in a quiet room by whispered and spoken voice tests.

153. Issue of medical certificate for persons under oral drugs.

A Medical Certificate may be issued to an applicant where oral drugs are administered under conditions permitting appropriate medical supervision and control and which, according to an accredited medical conclusion, are compatible with the safe exercise of the applicant's licence and rating privileges.

154. Visual requirements: General.

(1) A person who holds or intends to apply to be issued a medical certificate shall have—

(a) normally functioning eyes and adnexae;

(b) normal fields of vision, normal binocular function; and

(c) no active pathological condition, acute or chronic, nor sequelae of surgery or trauma of the eyes or their adnexae, which is likely to jeopardise flight safety.

(2) A person with reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia shall not be disqualified.

155. Vision testing requirements.

(1) The corrected and uncorrected visual acuity shall be measured and recorded at each examination.

(2) An applicant for a medical examination who uses contact lenses need not have his or her uncorrected visual acuity measured at each re-examination provided the history of the contact lens prescription is known.

(3) The test for visual acuity shall comply with the following—

(a) a visual acuity test in a lighted room, use a test illumination level of approximately 50 lx, normally corresponding to a brightness of 30 cd per square metre;

(b) visual acuity shall be measured by means of a series of optotypes of landolt, or similar optotypes, placed at a distance of six metres from the applicant or five metres as appropriate.

(4) The Authority may require a separate ophthalmic report before issuing a medical certificate.

(5) The conditions which indicate a need to obtain an ophthalmic report include—

(a) a substantial decrease in the uncorrected visual acuity;

(b) any decrease in best corrected visual acuity; and

(c) the occurrence of eye disease, eye injury or eye surgery.

156. Acceptability of correcting lenses.

(1) A person may meet the visual acuity fitness for near or distant vision by using correcting lenses.

(2) Correcting spectacles may be used if—

(a) not more than one pair of correcting spectacles is used to demonstrate compliance with visual acuity requirements;

(b) single-vision near correction lenses (full lenses of one power only, appropriate to reading) are not used for both near and distance vision; and

(c) in order to read the instruments and a chart or manual held in the hand, and to make use of distant vision through the windscreen without removing the lenses, the spectacles are as appropriate:

(i) lookover;

(ii) bifocal; or

(iii) trifocal.

(3) An applicant for a medical examination may use contact lenses to meet the distance vision acuity requirement if the lenses are—

(a) monofocal;

(b) non-tinted; and

(c) well tolerated.

(4) A person who is issued with a medical certificate that requires correcting lenses or spectacles shall have a limitation placed on the document, requiring that person, while exercising the privileges of the licence or certificate—

(a) wear the distant-correction lenses at all times;

(b) have readily available and use the near-correction spectacles as necessary to accomplish near vision functions; and

(c) have a second pair of suitable spectacles, distant or near-correction, available for immediate use.

157. Distance vision requirements.

(1) The Authority shall before issuing a medical certificate to an applicant ensure that the applicant has a distant visual acuity, with or without correcting lenses, of at least—

(a) 6/9 with binocular visual acuity of 6/6 or better, for class 1 medical certificate; or

(b) 6/12 with binoculars visual acuity of 6/9 or better, for class 2 medical certificate 6/9 with binoculars visual acuity of 6/6 or better, for class 3 medical certificate.

(2) Uncorrected distance visual acuity is not a limiting factor.

(3) An applicant for a medical certificate with a large refractive error shall use contact lenses or high-index spectacle lenses.

(4) Where spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(5) An applicant for a medical certificate whose uncorrected distant visual acuity in either eye is worse than 6/60 shall provide a full ophthalmic report prior to initial medical evaluation and every five years thereafter.

(6) An applicant for a medical certificate who has undergone surgery affecting the refractive status of the eye shall show proof that he or she is free of those sequelae likely to interfere with the safe exercise of the applicant's licence privileges.

158. Near vision requirements.

(1) An applicant for a medical certificate shall, before being issued the medical certificate, ensure that he or she meets the following minimum visual standards for near visual acuity to read, with or without corrective lenses, an—

(a) N14 chart or its equivalent at a distance of 100 cm, with "N14" referring to "Times Roman" font; and

(b) N5 chart at a distance of 30 to 50 cm as selected by the applicant, with "N5" referring to "Times Roman" font.

(2) Where the near-vision requirements are met only by the use of near-correction and the applicant also needs distant-correction, both corrections must be added to a pair of spectacles to be used to meet the requirements.

(3) When required to obtain or renew correcting lenses, an applicant for a medical certificate shall advise the aviation medical examiner of reading distances for the duties the applicant is to perform.

(4) An applicant for a medical certificate shall when to obtain or renew correcting lenses, advise the aviation medical examiner of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

159. Colour perception requirements.

(1) An applicant for a medical certificate shall demonstrate to the medical examiner the ability to perceive readily those colours the perception of which is necessary for the safe performance of duties.

(2) The applicant shall show ability to correctly identify a series of pseudoisochromatic plates (tables) in daylight or in artificial light of the same colour temperature such as that provided by Illuminate "C" or "D65" as specified by the International Commission on Illumination (CIE).

(3) An applicant who fails to obtain a satisfactory score in the identification test referred to in sub regulation (2) may nevertheless be assessed as fit provided the applicant is able to readily and correctly identify aviation coloured lights displayed by means of a recognised colour perception lantern in a special test conducted by the aviation medical examiner (AME).

(4) An applicant for a medical certificate who is unable to satisfactorily complete the identification test provided in sub-regulation (3)—

(a) shall only be eligible for a Class 2 Medical Certificate with the following restriction: "Valid for Day Operations Only;" and

(b) shall be advised that any sunglasses worn during the exercise of the privileges must be non-polarizing and of a neutral grey tint.

160. Ear and related structures.

(1) A person shall not hold or be issued a medical certificate if that person—

(a) possesses any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence or rating privileges;

(b) except for Class 3 Medical Certificate—

(i) has disturbance of vestibular function;

(ii) has significant dysfunction of the eustachian tubes;

(iii) has unhealed perforation of the tympanic membranes; and

(iv) has nasal obstruction;

(c) has malformation or 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) Except for a Class 3 medical certificate, a single dry perforation of the tympanic membrane need not render a person unfit.

161. Hearing requirements.

(1) The medical examiner shall ensure that, when tested on a pure-tone audiometer , an applicant for a medical certificate does not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1000 or 2000 Hz, or more than 50 dB at 3000 Hz.

(2) An applicant with a hearing loss greater than that specified in sub-regulation (1) 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) A person shall not hold or be issued a Class 2 medical certificate if that person is unable to hear an average conversational voice in a quiet room, using both ears, at a distance of two metres from the examiner and with the back turned to the examiner or an alternative 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.

162. Cardiovascular: General.

(1) A person shall not hold nor be issued a medical certificate if that person has any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of his or her licence or rating privileges.

(2) An applicant who has undergone coronary by-pass grafting or angioplasty with or without stenting or other cardiac intervention or who has a history of myocardial infarction or suffers from any other potentially incapacitating cardiac condition shall not hold nor be issued a medical certificate unless the applicant's cardiac condition is investigated and evaluated in accordance with best medical practice and is assessed by the medical examiner as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(3) The applicant for a medical certificate with an abnormal cardiac rhythm shall not hold or be issued a medical certificate unless the cardiac arrhythmia is investigated and evaluated with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

163. Blood pressure and circulation.

A person shall not hold or be issued a medical certificate if that person has—

(a) systolic and diastolic blood pressures outside normal limits; or

(b) a significant functional or structural abnormality of the circulatory system.

164. Electro-cardiography examination.

(1) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate.

(2) Electrocardiography shall be included in a re-examination of applicant for a medical certificate over the age of fifty years no less frequently than two years, except for Class 1 medical certificate which shall be annually.

165. Neurological requirements.

(1) A person shall not hold or be issued a medical certificate if that person has a medical history or clinical diagnosis of any of the following—

(a) a progressive or non-progressive disease of the nervous system, the effect of which, is likely to interfere with the safe exercise of the applicant's licence or rating privileges;

(b) epilepsy; or

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

(2) A person shall not hold or be issued a medical certificate if that person has suffered any head injury, the effects of which, are likely to interfere with the safe exercise of the applicant's licence and rating privileges.

166. Respiratory capability.

(1) A person shall not hold or be issued a medical certificate if that person has an established medical history or clinical diagnosis of—

(a) disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms during normal or emergency operations;

(b) active pulmonary tuberculosis; and

(c) asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations.

(2) Unless there is an accredited medical conclusion indicating that the use of drugs for control of asthma is not likely to interfere with the safe exercise of the applicant's license or rating privileges, the use of such drug shall disqualify the applicant from being issued a medical certificate.

(3) An applicant 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 by the medical examiner as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(4) An applicant with quiescent or healed lesions which are known to be tuberculous or are presumably tuberculous in origin, may be assessed by the medical examiner as fit.

167. Radiology (X-ray) evaluation.
A radiography evaluation shall be accomplished during the initial chest examination and shall be conducted as necessary in subsequent medical examinations where there are historical chest cavity issues, symptoms or doubtful clinal cases.

168. Vestibular apparatus.
(1) A person shall not hold or be issued a medical certificate if that person has an established medical history or clinical diagnosis of any of the following medical conditions—

(a) active acute or chronic pathological process of the internal ear or of the middle ear;

(b) a disease or condition of the middle or internal ear, nose, oral cavity, pharynx, or larynx that—

(i) interferes with, or is aggravated by, flying or may reasonably be expected to do so; or

(ii) interferes with, or may reasonably be expected to interfere with clear and effective speech communication;

(c) a disease or condition manifested by, or that may reasonably be expected to be manifested by, vertigo or a disturbance of equilibrium;

(d) permanent disturbances of the vestibular apparatus; or

(e) permanent obstruction to eustachian tubes.

(2) Unless there is an accredited medical conclusion indicating that the condition is not likely to affect the safe exercise of the applicant's license or rating privileges, the following medical conditions are disqualifying—

(a) acute or chronic impairment of nasal air entry on either side; or

(b) serious malformation or serious, acute or chronic affection of the buccal cavity or upper respiratory tract.

169. Bones, muscles and tendons.
A person shall not hold nor be issued a medical certificate if that person possesses 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 or rating privileges.

170. Endocrine system.
A person shall not hold or be issued a medical certificate if that person has an established medical history or clinical diagnosis of any metabolic, nutritional or endocrine disorders that are likely to interfere with safe exercise of his or her licence or rating privileges.

171. Diabetic applicant.
A person shall not hold or be issued a medical certificate if that person has an established medical history or clinical diagnosis of—

(a) insulin treated diabetes mellitus; or

(b) non-insulin treated diabetes mellitus 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 that person's licence or rating privileges.

172. Gastrointestinal and digestive tract.

(1) A person shall not hold or be issued a medical certificate if that person has an established medical history or clinical diagnosis of any of the following medical conditions-

(a) significant impairment of function of the gastrointestinal tract or its adnexa;

(b) sequelae of disease of, or surgical intervention on, any part of the digestive tract or its adnexae, likely to cause incapacitation in flight, in particular, obstruction due to stricture or compression; or

(c) hernias that might give rise to incapacitating symptoms except for Class 3 medical certificate.

(2) Unless there is an accredited medical conclusion indicating that the effects of the operation are not likely to cause incapacitation in flight, an applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs that may cause incapacity in flight shall not hold or be issued a medical certificate.

173. Kidneys and urinary tract.

(1) A person shall not hold or be issued a medical certificate if that person has an established medical history or clinical diagnosis of genitor-urinary disease, unless adequately investigated and his or her condition found unlikely to interfere with the safe exercise of the person's licence or rating privileges.

(2) A urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(3) A person shall not hold or be issued a medical certificate if that person has—

(a) any sequelae of diseases of, or surgical procedures on the kidneys or the genitor-urinary tract, in particular obstructions due to stricture or compression, unless his or her condition has been investigated and evaluated in accordance with the best medical practice and is assessed not likely to interfere with the safe exercise of that person's licence or rating privileges; or

(b) undergone nephrectomy unless the condition is well compensated.

174. Lympatic glands or disease of the blood.
An applicant for a medical certificate with diseases of the blood or the lymphatic system shall be assessed as unfit unless adequately investigated and his or her condition is found by the medical examiner as unlikely to interfere with the safe exercise of the applicant's licence or rating privileges.

175. Gynaecological conditions.
An applicant for a medical certificate who has a gynaecological disorder that is likely to interfere with the safe exercise of the applicant's licence or rating privileges shall be assessed as unfit.

176. Pregnancy.
(1) An applicant for a medical certificate who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(2) For an applicant with a low-risk uncomplicated pregnancy who is evaluated and supervised in accordance with sub-regulation (1), the fit certificate shall, in the case of Class 1 and 2 medical certificate be limited to the period from the end of the 12th week to the end of the 26th week of gestation and in the case of Class 3 medical certificate be limited until the period until the end of the 34th week of gestation.

(3) Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her licence until she has undergone evaluation in accordance with best medical

practice and it has been determined that she is able to safely exercise the privileges of her licence or ratings.

177. Speech defects.
An applicant for a medical certificate with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed by the medical examiner as unfit.

178. Acquired Immunodeficiency Syndrome.
(1) An applicant for a medical certificate with acquired immunodeficiency syndrome (AIDS) shall be assessed by the medcial examiner as unfit.

(2) An applicant for a medical certificate who is seropositive for human immunodeficiency virus (HIV) shall be assessed by the medical examiner as unfit unless full investigation provides no evidence of clinical disease.

PART XI—EXEMPTIONS.

179. Requirements for application.
(1) A person may apply to the Authority for an exemption from any of these Regulations.

(2) An application for an exemption shall be submitted at least sixty days in advance of the proposed effective date in order to obtain timely review.

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

(a) name;

(b) physical address and mailing address;

(c) telephone number;

(d) fax number if available; and

(e) email address if available;

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

180. Substance for the request for exemption.

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

(a) a citation of the specific requirement from which the applicant seeks exemption;

(b) an explanation of why the exemption is required;

(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 would be in the public interest, that is, benefit the public as a whole;

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

(h) if the applicant seeks to operate under the proposed exemption outside of Uganda's airspace, an indication whether the exemption would contravene any provision of the Standards and Recommended Practices of the International Civil Aviation Organisation (ICAO) as well as the Regulations pertaining to the airspace in which the operation will occur.

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

(3) The Authority may deny an application for an exemption if the Authority finds that the applicant has not justified the failure to apply for an exemption in a timely manner.

181. Initial review by the Authority.

(1) The Authority shall review the application for accuracy and compliance with the requirements of regulations 179 and 180.

(2) If the application appears on its face to satisfy the provisions of this regulation and the Authority determines that a review of its merits is justified, the Authority will publish a detailed summary of the application in either Uganda Gazette, aeronautical information circular or at least one newspaper of wide circulation for comment and specify the date by which comments must be received by the Authority for consideration.

(3) Where the filing requirements of regulations 178 and 179 have not been met, the Authority will notify the applicant and take no further action until the applicant corrects the application and re-files it in accordance with these Regulations.

(4) If the request is for emergency relief, the Authority shall publish the application or the Authority's decision as soon as possible after processing the application.

182. Evaluation of the request.

(1) The Authority shall, after initial review and where the filing requirements have been satisfied, conduct an evaluation of the request to determine—

(a) whether an exemption is in the public interest;

(b) whether the applicant's proposal provides a level of safety equivalent to that established by the regulation, although 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;

(c) whether a grant of the exemption contravenes the applicable ICAO Standards and Recommended Practices; and

(d) whether the request shall be granted or denied and of any conditions or limitations that shall be part of the exemption.

(2) The Authority shall notify the applicant by letter and publish a detailed summary of its evaluation and decision to grant or deny the request.

(3) The summary referred to in sub-regulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(4) If the exemption affects a significant population of the aviation community of Uganda the Authority shall publish the summary in an aeronautical information circular.

PART XII—GENERAL PROVISIONS

183. Possession of the licence.

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

(2) A crewmember 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 shall have it in his or her physical possession or at the work station when exercising the privileges of that licence, certificate or authorisation.

184. Use of psychoactive substances.

(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.

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

(3) The person referred to in sub-regulation (1) and (2) shall not engage in any kind of problematic use of substances.

185. Drug and alcohol testing and reporting.

(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.

(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—

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

(b) have their licence, certificate, rating, qualification, or authorisation suspended or revoked.

(5) A person who refuses to submit to a test to indicate the presence of narcotic drugs, marijuana, 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 the issuance of any licence, certificate, rating, qualification, or authorisation under these Regulations for a period of up to one year from the date of that refusal; or

(b) have their licence, certificate, rating, qualification, or authorisation suspended or revoked.

(4) A person who is convicted for the violation of any local or national law 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 the issuance of any license, 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 suspended or revoked.

186. Inspection of licences, certificates and authorisations.
A person who holds a licence, certificate or authorisation required by these Regulations shall present it for inspection upon a request from the Authority or any person authorised by the Authority.

187. Change of name.
(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 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.

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

188. Change of address.
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;

(b) mailing address upon the change.

189. Replacement of documents.
A person may apply to the Authority in writing for replacement of documents issued under these Regulations if the documents are lost or destroyed.

190. Suspension and revocation of documents.

(1) The Authority may, where it considers it necessary 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 shows sufficient ground to the satisfaction of the Authority and where it considers it necessary 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, where it considers it necessary in the public interest, prevent any person or aircraft from flying.

(4) A holder or any person in 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.

191. Use and retention of documents and records.

(1) A person shall not—

(a) use any licence, certificate, approval, permission, exemption, authorisation or other document issued or required by these Regulations which is forged, altered, revoked, or suspended, or to which he or she is not entitled;

(b) forge or alter any licence, certificate, approval, permission, exemption, authorisation or other document issued or required by these Regulations;

(c) lend any licence, certificate, approval, permission, exemption, authorisation or other document issued or required by these Regulations to any other person; or

(d) make any false representation for the purpose of procuring for himself or herself or any other person the grant, issue renewal or variation of any such licence, certificate, approval, permission or exemption, authorisation or other document.

(2) A person shall not, during the period for which it is required under these Regulations to be preserved, mutilate, alter, render illegible or destroy any records, or any entry made therein, required by these Regulations to be maintained, or knowingly make, or procure or assist in the making of, any false entry in any such record, or wilfully omit to make a material entry in such record.

(3) All records required to be maintained by these Regulations shall be recorded in a permanent and indelible material.

(4) A person shall not issue any certificate, document or exemption under these Regulations unless he is authorised to do so by the Authority.

(5) A person shall not issue any certificate of the kind referred to in sub-regulation (4) unless he or she has satisfied himself or herself that all statements in the certificate are correct, and that the applicant is qualified to hold that certificate.

192. Reports of violation.

(1) A person who knows of a violation of the Civil Aviation Act or any regulations or orders issued under that Act, shall report the violation to the Authority.

(2) The Authority will determine the nature and type of any additional investigation or enforcement action that need be taken.

193. Enforcement of directions.

A person who fails to comply with any direction given to him or her by the Authority or by any authorised person under any provision of these Regulations shall be considered for the purposes of these Regulations to have contravened that provision.

194. Aeronautical user fees.

(1) The Authority may specify the fees to be charged in connection with the issue, validation, renewal, extension or variation of any certificate, licence or other document including the issue of a copy of such a document or for any examination, test, inspection or investigation or the grant of any permission or approval, required by or for the purpose of these Regulations and any orders, notices or proclamations made under the Act.

(2) All applications made under this regulation shall be accompanied with the relevant fees as stipulated in sub regulation (1).

(3) Any application fee paid for purposes of this regulation, whether the application is withdrawn or ceases to have effect or is rejected by the Authority, is non refundable.

195. Application of regulations to Government and visiting forces.

(1) These Regulations apply to aircraft, not being military aircraft, belonging to or exclusively employed in the service of the Government.

(2) For the purposes of such application, the Department or other authority for the time being responsible for management of the aircraft shall be considered as the operator of the aircraft and in the case of an aircraft belonging to the Government, to be the owner of the interest of the Government in the aircraft.

(3) Except as otherwise expressly provided, the naval, military and air force authorities and member of any visiting force and property held or used for the purpose of such a force shall be exempt from the provision of these regulations to the same extent as if the visiting force formed part of the military force of Uganda.

196. Extra-territorial application of Regulations.

Except where the context otherwise requires, these Regulations—

(a) in so far as they apply, whether by express reference or otherwise, to aircraft registered in Uganda, shall apply to such aircraft wherever they may be;

(b) in so far as they apply, whether by express reference or otherwise, to other aircraft, shall apply to such aircraft when they are within Uganda;

(c) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything by any person in, or by any of the crew of, any aircraft registered in Uganda, shall apply to such persons and crew, wherever they may be; and

(d) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything in relation to any aircraft registered in Uganda by other persons shall, where such persons are citizens of Uganda, apply to them wherever they may be.

PART XIII—OFFENCES AND PENALTIES.

197. Contravention of Regulations.

A person who contravenes any provision of these Regulations may have his or her licence, certificate, approval, authorisation, exemption or other document revoked or suspended.

198. Offences and penalties.

(1) If any provision of these Regulations or any order, notice or proclamation made under these Regulations is contravened 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 shall, without prejudice to the liability of any other person under these Regulations for that contravention, be considered for the purposes of this regulation to have contravened that provision unless he or she proves that the contravention occurred without his or her consent or connivance and that he or she exercised all due diligence to prevent the contravention.

(2) A person who contravenes any provision specified as an "A" provision in the Second Schedule to these Regulations commits an offence and is on conviction liable to a fine not exceeding fifty currency points for each offence or each flight or to imprisonment for a term not exceeding one year or to both.

(3) A person who contravenes any provision specified as a "B" provision in the Second Schedule to these Regulations commits an offence and is on conviction liable to a fine not exceeding one hundred currency points for each offence or each flight or to imprisonment for a term not exceeding three years or to both.

(4) A person who contravenes any provision of these Regulations not being a provision referred to in the Fourth Schedule to these Regulations, commits an offence and is on conviction liable to a fine not exceeding one hundred currency points and in the case of a second or subsequent conviction for the same offence to a fine not exceeding two hundred currency.

199. Revocation and savings.

(1) The Civil Aviation (Personnel Licensing) Regulations 2012, SI No.31 of 2012 is revoked.

(2) A valid licence, certificate, permit or authorisation issued or granted by the Authority before the commencement of these Regulations shall, until its expiry, have effect as if issued under these Regulations.

FIRST SCHEDULE

Regulation 2

CURRENCY POINT

A currency point is equivalent to twenty thousand Uganda shillings.

SECOND SCHEDULE

Regulation 4(3)

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 that issued the licence;

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

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

(vi) Nationality of holder;

(vii) Signature of holder;

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

(ix) Certification concerning validity and authorisation for holder to exercise privileges appropriate to licence;

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

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

(xii) Ratings, including category, class, type of aircraft, airframe and aerodrome control;

(xiii) Remarks, i.e. special endorsements relating to limitations and endorsements for privileges, including from the 5th day of March, 2008 an endorsement of language proficiency, and other information required under article 39 of the Chicago Convention;

(xiv) 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) of 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.

THIRD SCHEDULE

Regulations 7(1)

LANGUAGE PROFICIENCY REQUIREMENTS

(1) An applicant for a licence or a licence holder shall, in order to meet the language proficiency requirements contained in regulation 7, 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 or 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.

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(3) Rating scales:

The following are the relevant 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. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning;

(iii) Vocabulary: Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances;

(iv) Fluency: Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting;

(v) Comprehension: Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies;

(vi) Interactions: Responses are usually immediate, appropriate and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming or clarifying.

(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 in dialect or accent or registers;

(iv) Interactions: Responses are immediate, appropriate and informative. Managers the speaker or listener relationship effectively.

(c) Expert Level (Level 6)

(i) Pronunciation: Pronunciation, stress, rhythm, and intonation, thought possibly influenced by the first language or regional variation, almost never interfere with ease of understanding;

(ii) Structure: Both basic and complex grammatical structures and sentence patterns are consistently well controlled;

(iii) Vocabulary: Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register;

(iv) Fluency: Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, such as to emphasise 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.

Regulation 56

REQUIREMENTS FOR THE ISSUE OF THE MULTI-CREW PILOT LICENCE — AEROPLANE

1. Training

(1) The applicant shall, in order to meet the requirements of the multi-crew pilot licence in the aeroplane category, complete 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 acquire the knowledge, skills and attitudes required as the underpinning attributes 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.

2. Assessment level

The applicant for the multi-crew pilot licence in the aeroplane category shall have satisfactorily demonstrated performance in all the nine competency units specified in paragraph 3, at the advanced level of competency as defined in the Level of Competency.

3. Competency units

The nine competency units that an applicant has to demonstrate are as follows:

(a) apply threat and error management (TEM) principles;

(b) perform aeroplane ground operations;

(c) perform take-off;

(d) perform climb;

(e) perform cruise;

(f) perform descent;

(g) perform approach;

(h) perform landing; and

(i) perform after-landing and aeroplane post-flight operations.

4. Simulated flight

(1) The flight simulation training devices used to gain the experience specified in regulation 58 shall have been approved by the Authority.

(2 Flight simulation training devices shall be categorized as follows:

(a) *Type I.* E-training and part tasking devices approved by the Authority that have the following characteristics:

(i) involve accessories beyond those normally associated with desktop computers, such as functional replicas of a throttle quadrant, a sidestick controller, or an FMS keypad; and

(ii) involve psychomotor activity with appropriate application of force and timing of responses.

(b) *Type II.* A flight simulation training device that represents a generic turbine-powered aeroplane.

(c) *Type III.* A flight simulation training device that represents a multi-engined turbine-powered aeroplane certificated for a crew of two pilots with enhanced daylight visual system and equipped with an autopilot.

(d) *Type IV*. Fully equivalent to a Level D flight simulator or to a Level C flight simulator with an enhanced daylight visual system..

MULTI-CREW PILOT LICENCE — AEROPLANE LEVELS OF COMPETENCY

1. Core flying skills

The level of competency at which the applicant shall comply with the requirements for the private pilot licence, including night flight requirements, and, in addition, complete, smoothly and with accuracy, all procedures and manoeuvres related to upset training and flight with reference solely to instruments. From the outset, all training shall be conducted in an integrated multicrew, competency-based and threat and error management (TEM) environment. Initial training and instructional input levels are high as core skills are being embedded in the *ab initio* application. Assessment at this level confirms that control of the aeroplane is maintained at all times in a manner such that the successful outcome of a procedure or a manoeuvre is assured.

2. Level 1 (Basic)

The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that if the successful outcome of a procedure or manoeuvre is in doubt, corrective action is taken. Performance in the generic cockpit environment does not yet consistently meet the Standards of knowledge, operational skills and level of achievement required in the core competencies. Continuous training input is required to meet an acceptable initial operating standard. Specific performance improvement or personal development plans will be agreed and the details recorded. Applicants will be continuously assessed as to their suitability to progress to further training and assessment in successive phases.

3. Level 2 (Intermediate)

The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that the successful outcome of a procedure or manoeuvre is assured. The training received at Level 2 shall be conducted under the instrument flight rules, but need not be specific to any one type of aeroplane. On completion of Level 2, the applicant shall demonstrate levels of knowledge and operational skills that are adequate in the environment and achieves the basic standard in the core capability. Training support may be required with a specific development plan to maintain or improve aircraft handling, behavioural performance in leadership or team management. Improvement and development to attain the standard is the key performance objective. Any core competency assessed as less than satisfactory should include supporting evidence and a remedial plan.

4. Level 3 (Advanced)

The level of competency required to operate and interact as a copilot in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, under visual and instrument conditions. Assessment confirms that control of the aeroplane or situation is maintained at all times in such a manner that the successful outcome of a procedure or manoeuvre is assured. The applicant shall consistently demonstrate the knowledge, skills and attitudes required for the safe operation of an applicable aeroplane type as specified in the performance criteria.

FIFTH SCHEDULE

Regulation 119

KNOWLEDGE AND SKILL REQUIREMENTS FOR AIRCRAFT MAINTENANCE ENGINEERS LICENSING

1. The subjects relevant to the knowledge and skill requirements for all Licence Categories specified in regulation 5(8) are presented in this Schedule in a Modular format.

2. The examinations for each Category of Licence, and its Sub-Divisions where appropriate, shall be based on a number of the Modules as indicated in the Module/Category relationship set out in the Table below.

3. From the Table it will be noted that the modular arrangements recognise that major areas of the subjects are common to more than one Licence Category or its Sub-Divisions. Thus, when an existing Licence is to be extended to include another Category or Sub-Division, those Modules that have been satisfied by previous examinations may be excluded.

4. Each module is numbered and contains a series of syllabus subject headings. Each subject is then further expanded in more detail against 'level numbers' corresponding to Licence Without Type Rating (LWTR) and Type Rating (TR). This expansion of detail provides an indication of the degree/level of knowledge, experience, competence and skill in aeronautical engineering required by the Regulations.

5. There are three level numbers and they are defined as follows:

   (a) Level 1: General appreciation of principles and familiarisation of the subject;

   (b) Level 2: Comprehension of principles and salient features with a practical ability to assess operational condition;

   (c) Level 3: Detailed knowledge of all aspects of the subject.

6. In applying the above levels to the subjects which, in particular relate to aircraft, engines, systems and items of equipment, the following aspects shall be taken into account:

   (a) theoretical principles;

   (b) constructional arrangements, functional and design features;

   (c) maintenance practices;

   (d) normal, deteriorated and failed conditions.

TABLE: MODULE / CATEGORY RELATIONSHIP

Category / Module	A- Aeroplanes	'C' - Engines		'A' & 'C' Rotorcraft		'A' & 'C' Airship		- X -					'R' - Radio	
		Piston	Turbine	Piston	Turbine	Piston	Turbine	Electrical	Instruments	Automatic Pilots: Aeroplane	Automatic Pilots: Rotorcraft	Compass Compensation	Communication & Navigation	Radar
	SUBJECT MODEL							**NUMBERS-**						
Regulations	1	1	1	1	1	1	1	1	1	1	1		1	
Basic Engineering	2	2	2	2	2	2	2	2	2	2	2		2	
Digital Functions														
Common	3			3	3	3	3							
Common	4(a)													
Common	4(b)													
Piston Engine		6		6		6								
Propellers		7	7			7	7							
Turbine Engine			8		8		8							
Rotorcraft				9	9									
Airship						10	10							
Human Performance	13	13	13	13	13	13	13	13	13	13	13		13	
Basic: Electrical equipment & System Instruments								21	22					
Basic: Electronic Gyroscopes Servo-mechanism									23	23	23			
Automatic Pilots: Aeroplanes										24				
Automatic Pilots: Common										25	25			
Automatic Pilots: Rotorcraft											26			
Compass Compensation												30		
Radio: Communication & Navigation													31	
Radio: Radar														32

MODULAR KNOWLEDGE AND SKILL SUBJECTS FOR AIRCRAFT MAINTENANCE ENGINEER

MODULE 1 REGULATIONS

Syllabus Subject	Level		Details
	WTR	TR	
Maintenance Engineers' Licences & Authorisations	2	-	Civil Aviation Regulations requirements
			Responsibilities: by statutory law and by the need to fly aircraft in a satisfactory condition, i.e. common, civil, or constitutional law
			Penalties – under statutory law and resulting from civil law suits
			Categories - applicability
			Areas and extent of limitations and privileges within categories
			Overlap of category applicability
			Relevant Airworthiness Notices and other Authority guidance manuals
Aircraft Registrations	1	2	International and national registration requirements
			Registration process
Certificate of Airworthiness	1	2	Issue of Certificate of Airworthiness requirements
			Categories of certificate of airworthiness and purpose of flight
			Prototypes, modified prototypes, series aircraft
			Renewal of certificate of airworthiness requirements and process

Maintenance and Maintenance Records and Certification	1	2	Civil Aviation Regulations requirements and other applicable guidance material issued by the Authority
			Maintenance certification: certificate of release to service
			Duplicate inspections
			Contributory certifications and reliance on other documentation and persons
			Certification - acceptance investigation and judgment procedures
			Modification standards, process and recording
			Maintenance records – relevance of previous records
			Maintenance records – requirement to be kept, preservation and production
			Offences in relation to documents and records
			Inspection requirements and Standards' persons authorised
			Build Standards
			Maintenance responsibilities
Aircraft, engine and VP Propeller Log Books	1	2	Civil Aviation Regulations requirements and other applicable guidance material issued by the Authority
			Authority approval: Light aircraft, large aircraft
			Worksheet; technical log
			Data to be entered in technical log books

			Condition reports – e.g. heavy landing checks, defect investigations, NDT and other inspections, mandatory and non-mandatory
			Maintenance checks and inspections
			Cross-reference to other files/records
			Preservation of documents; Civil Aviation Regulations requirements
Technical log	1	2	Civil Aviation Regulations requirements
			Technical Log – Air Operators Certificate Requirements
Aircraft Documentation and Requirements	1	2	Type certification and supplemental type certification
			Documents to be carried
			Flight manual – provision of manuals and aircraft performance
			Mass Schedule and aircraft loading
			External, and internal markings and signs, e.g. nationality and registration no smoking and fasten seat belt, placards and requirements, doors and exits
			Certificate of Airworthiness
			Certificate of registration
			Air Operators Certificate
			Instrument and Equipments
			Radio Station license and approval
			Change of ownership
			Aerial work, including parachuting, glider towing etc – certification
			Exits and break-in markings

Approvals	-	1	Design organizations
	1	2	Approved maintenance Organization
			Maintenance Schedules/ programmes
			AOC and AMO interface
			100 hours and annual inspections
			Aircraft parts stores requirements and management
Defect Reporting	1	2	Civil Aviation Regulations requirements
			Reportable occurrences (defects, incidents, accidents)
Authority Requirements	1	2	Manual of Airworthiness Requirements
			Airworthiness Notices
			Foreign airworthiness directives
Manufactures requirements	1	2	Service bulletins, manuals service letters etc
Foreign Authorities requirements	1	2	FAA, CAA (UK), JAR
ICAO Annexes requirements	1	2	Annexes 1, 6 and 8

Module 2 Basic Engineering Practices

Syllabus Subject	Level		Detail
	VTR	TR	
Engineering Drawings and Technical Information	1	2	Drawing details-common practices: plan, elevations, isometric, sections, scale, dimensional and indicating presentation
	2	2	Use, validity control, interpretation
	1	2	Maintenance Manuals, Parts Catalogues, Overhaul Manuals
			Service bulletin and modification data
			Maintenance schedules: approved and otherwise
	2	2	Wiring diagram manuals, Interconnection charts, Schematic diagrams, Symbols
Mathematics	1	-	Simple calculations: measurements, angles, graphs, metric/imperial, volume, forces, moments, centre of gravity
			Transposition of formulae, Powers of numbers, Binary notation, Simple equations, Conversion of units

			Resolution of forces
	1	-	Pressure/volume/temperature of gases
			Density, specific gravity, Pressure
			Hydraulics: basic principles, liquids in flow and static conditions
			The atmosphere- density/ pressure/temperature/altitude/ humidity
			Basic principles of motion, acceleration, centrifugal, centripetal forces, friction
			Basic electrical laws, units, power in circuits, Magnetism, circuit calculation
Hangar/Workshop Common Practices and Tools	1	-	Lubrication methods and application
			Hand tools, simple machine tools
			Go/No Go gauges, fits and clearances
	2	2	Crimping tools, hand and hydraulic
	1	-	Precision measuring instruments, Electrical measuring instruments, Circuit testing methods
	2	-	Torque loading
	1	-	Assessment of in service condition of soldered, brazed and welded joints
	1	-	Inhibiting and corrosion protection
			Painting and paint stripping
	1	-	Metal contamination
			Fire protection and safety in and around the workshop/hangar/ aircraft

			Storage and handling
Common Parts	1	2	Control cables and fittings
			Fastening devices – threaded, riveted and swaged
			V-band clamps and couplings
			Locking: parts and methods
			Washers
			Bearings
			Pipes: rigid and flexible
			Keys and key ways
			Worm drive and other types of band clips
Gases and Compounds	1	2	Air, nitrogen, carbon dioxide, oxygen, helium
			Acetylene
			Safety aspects
			Adhesives, oils, greases, sealing compounds, solvent
Basic Electrics	2	-	General principles and practices
	2		Simple circuits a.c. to d.c., d.c. to a.c., a.c. to a.c. conversion
	1	2	Ground services ac and dc
			Batteries, application and handling
			Insulators and Insulation, Conductors and conductivity
			Common items used in aircraft applications, e.g. resistors, potentiometers, solenoids
			Transformers, single phase and auto
			Semi-conductors, capacitors, relays
			Micro switches
			Proximity detectors
			Fuses, circuit breakers

			Motors/actuators
			Principles of frequency wild, constant frequency a.c. power
	1		Circuit wiring, connectors, crimping, clipping, cable sizes and types, cable looms, harnesses, terminations and disconnects
			Bonding, earthing of aircraft
	1		Static electricity; lightning; static charges; 'interference' effects on radio equipment, electrostatic damage protection
Environmental Aspects	1	2	Effects of snow, ice, lightning and turbulence

Module 3 Category 'A' Common – Aeroplanes, Rotorcraft and Airships

Syllabus Subject	Level		Detail
	WTR	TR	
Basic Aerofoil Theory	1	2	Lift/thrust/drag/weight
			Stalling of an aerofoil
			Induced and parasitic drag
			Boundary layer
			Aerofoil shapes
			Chord/span/aspect ratio
Sub-Structures	1	2	Folded metal, sheet metal, extrusions, tubing
			Effect of swaging, lightening holes
			Use of different metals
			Commonly used fasteners and joint methods
			Protective treatments and precautions
			Honeycomb
			Reinforced plastic or epoxy materials, applications
			Floors

			Seats – crew, passenger – 'crash' situation
			Aerials, Pilot probes, drain masts, air intakes and similar structural fitments.
			Instrument panels and consoles
			Radio equipment racks and stowages
Metals	1	-	Light alloys, iron and steel
	1	2	Titanium
	1	-	Brass, bronze, copper, lead
	1	2	Recognition and general characteristics of metals used
			Application and use of metals
			The purpose of heat treatments
			Use of different heat treated materials
			Anodic treatments
			Corrosion treatments during manufacture
			Identification of corrosion
	2	2	Corrosion treatments during repair
			Fatigue
			Other protective treatments or finishes
Non-destructive Condition-Testing	1	-	Typical uses and display of defects using:
			X ray/gamma ray, ultrasonic, eddy current, magnetic particle
	2	-	Penetrant leaching
	1	2	Visual probes
			Eyeglass equipment: usefulness, effectiveness of various magnifications
Materials – non Metal Reinforced Plastics/Epoxy Composites	1	2	Glass, fibre and filament reinforcement
			Materials used
			Cold setting, hot setting systems

			Construction principles used, aircraft applications
			Failure characteristics
			Honeycomb, foam sandwich
Hydraulic	2	-	Simple systems, i.e. powered pump, reverse selection, pressure relief, pressure regulation LP AND HP filters
	1	2	Types of pump
			Differing fluids – mineral/fire resistant
			Control and indication methods
Landing Gear and Brakes	1	2	Wheels, tyres, shock absorbers, castering, steering methods
	2	-	Simple hydraulic brakes, i.e. master cylinder to wheel-brake unit
	1	2	Brake discs and callipers
	1	-	Landing and braking energy conversion
Electrical	1	2	Simpler type systems
	1	2	Batteries, generators, relays, wiring, switch gear
			Voltage control
			Current limiting, circuit protection devices
			Paralleling
			a.c. from inverters
			Crimping
			Soldered joints
			Control and indications, magnetic indicators and annuciators
Instruments (other than Engines)	1	2	Pitot or static systems and associated instruments
			Gyro instruments – vacuum, pressure, or electrical
			Pressure and temperature Indication
			Position indication

			Compasses
Radio	1	-	VHF communication systems
Safety Equipment	1	2	Fire extinguishers – hand
			Life jackets
			Life rafts
			Seat belts or harnesses-passenger or crew 3-point, 4-point, inertial, lapstraps
	-	3	Mandatory requirements for upper torso restraint
Ground Handling	1	1	Jacking, trestling, slinging, towing, tie down
			'Servicing' activities
			Storage
			Painting – protective finish or external markings
	1	2	Weighing and centre of gravity determination – weighing report
			Civil Aviation Requirements e.g. Airworthiness Notices, manual of Airworthiness Requirements
			Scale position
			Basic Weight
			Unusable fuel
			Oil and other consumable liquids - quantities
			Role variations
			Hold, seat row, removable equipment
			Station identification
			C of G datum

MODULE 4(A) CATEGORY 'A' – AEROPLANES

Syllabus Subject	Level		Details
	WTR	TR	
Theory of Flight and Control	1	2	Stability and control
			Equilibrium
			Stalling of the aircraft

			Flaps and slats
			Aerodynamic balance
			Mass balance
			Aileron, elevator, rudder control
			Tabs – servo/anti-servo, balance, anti-balance, trim or spring
			Canard or foreplanes
Aircraft Structures	1	2	Main structures - fuselage or wing
			Stressed skin – diaphragms and longerons
			Tubular structures
			Skin, frames, and stiffening
			Wing: spar and rib structures
			Integral fuel tanks
			Load paths
			Empennage
			Windows, doors and hatches
Refurbish/'Overhaul' of Aircraft	1	2	Preparation of the aircraft–cleaning, access dismantling, jacking and trestling, furnishing removal
			Preparation of inspection reports and establishment of work required
			Final inspection – preparation of final reports and records/log book entries
			Mandatory modifications, Inspections, Service bulletins, Airworthiness Directives applicable to the type rating sought
Overhaul/Repair of Parts/ components	1	2	Overhaul data – requirements, documentation, work sheets, inspection stages, testing
			Use and control of workshop inspection aids including non-destructive test equipment

			Factors and limitations affecting choice of equipment and methods used
			Overhaul and testing procedures for component parts of pneumatic, hydraulic, air conditions, oxygen, anti-icing, de-icing, fire extinguishing and rotorcraft transmission systems
			Assembly procedures and approved repair schemes applicable to major components
			Engine mounting structures
			Inspections necessary before, during and after repair, including checking of alignment and symmetry
			Repair, inspection and testing of tanks, heat exchangers, fuel and oil systems, and all types of control systems relevant to the Licence category sought
Facilities	1	2	Preparation and layout of workshops
			Care, use and checking for accuracy of test equipment
Welding	1	2	Use and application
			Approved welders – limitations, periodic testing
			Supporting – pre-heating – pressure relief
			Cleaning and preparation
			Fluxes and filler or welding rods
			Gas and specialist welding principles
			Materials
			Strength of welded joints
			Inspection before, during and after welding
			Pre-and post-treatments
			Equipment

Brazing/hard Soldering	1	2	Use and application
			Support, pre-heating, pressure relief
			Cleaning and preparation
			Fluxes – fillers/spelter
			Materials
			Equipment
Materials – non Metal:			
(1) Wood	-	2	Types, application and uses
			Diseases – environmental effects
			Plywoods
			Glues – past and present
			Storage and condition control
			Damage-failure modes
			Painting/protective finishes
(2) Fabrics	-	2	Natural and man-made materials – types, applications and used
	-	1	Techniques used during covering
	-	2	Repairs
			Paint finishes and protective treatments
			Butrate and nitrate paints
			Ageing
			Tautening, heat shrinking
			Strength considerations
			Drainage and apertures
			Stitching, stringing, adhesives
			Testing
Systems:			
(1) Flight Controls	1	2	Aileron, elevator rudder
			Operating systems and surfaces – manually operated
			Trim operating systems and surfaces – manual and electric
			Flap systems – electrical, hydraulic and manual
	-	2	Flap systems – pneumatic

	1	2	Simple asymmetric protection
			Slat systems – automatic, and manual
	-	2	Hydraulic
	1	2	Tab systems – trim, balance, servo, anti- servo, anti-balance, spring servo
			Stall sensing and warning – simple systems, e.g. vane or reed types
			Basic auto pilots – simple systems
			Inputs into main controls- function testing – attitude, heading and height sensing
(2) Ice and Rain Protection	1	2	Liquid, electric and boot systems
			Power source, control and indication
			Windscreen wipers
	-	2	Electrically-heated windscreens
(3) Heating and Ventilation	1	2	Combustion heaters, exhaust heat exchangers
			Ram air
			Ventilation fans
(4) Oxygen	1	2	Bottle storage, distribution, regulation
			Masks
	2	-	Safety features and requirements
(5) Pressurisation	1	2	Simple systems – bleed air, turbo-charger bleed
			Passenger environmental requirements for the control of: oxygen, heating, ventilation, rate of change, humidity
			Mass flow control

	1	2	Temperature control
			Differential pressure – maximum, negative
			Control and indication
			Cabin structure, windows and doors for pressurised flight
(6) Vacuum/Pressure	1	2	Dry and wet pump systems
			Oil separation
			Gyro supply
			Relief valve
			Filtering
			Aerofoil anti-icing
(7) Pneumatic	-	2	Landing gear or flaps/brakes
			Operating systems
			Basic theory and common practices

MODULE 4(B) CATEGORY 'A' – AEROPLANES

Syllabus Subject	Level		Details
	WTR	TR	
Theory of Flight and Control	1	2	Transonic effects, swept wings, wing fences, spoilers, high lift devices vortex generators
			High speed stall
			Shock wave
			Speed of sound-mach numbers
			Work turbulence
	-	2	Supersonics – sound waves
			Delta wing forms
			Kinetic heating
			C of G control
	1	2	Active controls – computerised flight
			Management systems – general principle
Aircraft Structures	1	2	Fail-safe application
			Fatigue effects and control
			Wing: box or integral tank construction
			Pressure-loaded skin, bulkheads, windows, windscreens, doors

			Milling or chemical etch constructed structure
			Bonded type construction
			Fasteners-close tolerance
			Sealing compounds
			Maintenance programmes-structural survey
			NDT programme
			Large aircraft paint and protective Finishing processes
			Cargo holds
			Venting and draining
			Sound proofing
M			
Furnishings	1	1	Upholstery
			Toilet and galley partitioning
			Carpets and Curtains
			Particle boards and plastic laminates
	1	2	Fire resistance/escape requirements
			Passenger seats
			Crew seats – cabin and flight crew
Systems:			
(1) Flight Control	1	2	Powered controls
			Spoiler, air or speed brake, lift dump
			Lift augmentation-LE droop, slats or flaps
			Flap operating systems – large transport aircraft
			Flap asymmetric and alternate operation
			Stall sensing-stick shake
	-	2	Stick push/nudge
	-	1	Electronic control system
	1	1	Fly by wire

(2) Hydraulic	1	2	Variable delivery systems
			Accumulator or cut-out dependent system
			Pressure or volume control
			Pressure-reducing valves
			Fire-resistant fluids-temperature, contamination, compatibility
			Pressurised reservoirs
			Multiple system provision
			Alternate systems-HYRAT or hydraulic motors
			Electrically-powered and air-driven systems
			Leak protection systems – system isolation, 'fused' systems, priority control
			Internal leakage – cause and effects – acceptability
(3) Landing Gear	1	2	Multiple axles and wheels
			Bogey beams
			Door sequencing
			Main and alternate brake provision
			Anti-skid system-electronic and mechanical-aquaplaning
			Landing gear unsafe protection
			Alternate lowering
			Weight on or weight off sensing
			Fire protection
			Powered steering–retraction self centring
	-	2	Auto braking
(4) Pneumatic (ATA 36)	1	2	Bleed air pneumatic systems
			Systems supplied
			Bleed air valves
			Mass, flow, pressure and temperature control and indication
			Ducting

			Leak detection
			Alternate supply-APU and ground cart
(5) Ice and Rain Protection	1	2	Mainplane or tail hot air anti-ice systems
			Control and indication
			Leak/overheat-detection or protection
	1	2	Ice detection
			Rain repellant
			Windscreen wipers
			Laminated windscreen heating
			Waste water discharge
			Pilot/static sensors
(6) Environmental and passenger Systems: -			
6.1 Air Conditioning	1	2	Cabin blower or bleed air supply
			Heat exchangers
			Cold air units or air cycle machines
			Vapour cycle systems
			Humidity control systems
			Mass, flow, pressure and temperature control and indication
			Leakage detection and protection
			Ventilation requirements
			Passenger service unit air supply
			Water extraction
			Recirculation
6.2 Pressurisation	1	2	Outflow control - electric, electronic and pneumatic
			Maximum differential and negative pressure control
			Cabin altitude and rate of change
			Emergency dump and manual control
			Ditching

			Cabin altitude and rate of change
			Entrance or access or baggage door sealing and locking, indications and warnings
6.3 Oxygen	1	2	Storage, distribution and charging
			Drop-out system
			Chemical systems
			Therapeutic provision
			Masks – passenger or crew or smoke
	1	3	Bottle checks and precautions
6.4 Toilets, Waste and Water, Galley Services	1	1	Toilets: servicing provision
	1	2	Toilet flushing systems – pump over – heat protection
			Water – washing, hot or cold, potable
			Potable water – health protection
			Pressure control
			Water heating systems – safety provisions
			Waste collection and drainage
			Galleys-refrigerators, food and drink, ice – health protection
			Lifts, safety factors
			Catering trolleys
6.5 Baggage	1	2	Automatic systems-pallets and containers
			Restraint and securing
			Dangerous goods
6.6 Entertainment and Passenger service	1	1	Films, video, television and audio
			Public address
(7) Electrical	1	1	3-phase a.c. power generation systems - Control and protection Transformer rectifier units Cables and terminators
			Basic electronics-hardware – printed circuit boards

			Built-in testing provisions
			Static inverters
	-	1	Multiplex – basic principles
	1	1	Logic – basic principles
(8) Instruments	1	1	ADI, HSI representation and ground functioning
			Altitude encoding and transponder systems – general
			Computer inputs
			Centralised air data units
			CRT displays
			Flight recorders – voice recorders
			INS
(9) Equipment, Safety	1	2	Slide, rafts, dinghies
			Portable oxygen
			Loud hailers
			Smoke masks or hoods
			Survival equipment
			Notices or placards

Module 6 Category 'C' –Piston Engines in Aeroplanes, Rotorcraft and Airships

Syllabus Subject	Level		Details
	WTR	TR	
Principles, Terminology			
Definitions and Laws	1	2	Normally aspirated and supercharged operation
			Two and four stroke cycles
			Ignition timing, mixture, fuel grade detonation.
			Power
			Overhaul periods or continuation in service beyond overhaul recommendation
			Ground running – principles and problems

			Effect of altitude, humidity, temperature and icing
			Standard atmosphere, pressure altitude
			Fixed and variable pitch propeller effects
			Vibration characteristics and damping
			Type certification
Engine overhaul: General	2	-	Overhaul as a condition control process – its advantages and disadvantages
			Familiarity with the operating environment of piston engines in aircraft
			Sudden stoppage – over-revving, over-boosting, over-heating
			Bogus parts
			Fatigue
			Mandatory reporting
			Fuels and oils – Mogas
Overhaul Process Control	2	-	Facilities: shop layout – stores; work environment; equipment for cleaning, inspection, rework and testing
			Control of precision measuring instruments and equipment
			Work package control and processing
			Acceptability of third party work/opinions/reports/recommendations e.g. manufacturers and their agents/other agencies
			Use of experts and expert opinion
			Use of unskilled labour
Constructional Arrangement and Piston Engine General Consideration	1	1	General arrangement – internal
	1	2	General arrangement - external
			Crankcase breathing
			Propeller shaft sealing

			Propeller attachment provision material
			Power take-off provision
			Cooling
			Cylinders, pistons and valve gear
			Hydraulic tappets
			Camshaft
			Casings, mountings and accessories drive
			Vibration damping
			Crankshaft, balance weights, main bearings
			Auxiliary drives, internal lubrication provisions
			Seals and sealing materials
			Oil coolers and thermostatic valves
			Oil pumps, filtering, pressure control
			Fuel pumps – engine driven
			Ignition and valve timing provision
			Drive pulleys
			Hardness testing, fits and clearances Dowels and blind holes
			Sequential torque assembly – retorquing requirements
			Tooth patterns and backlash checks
			Contact area checking
			End float clearance, checking and setting
			Bonding and main earthing
Repairs and rectification	1	1	Machining
			Heat treatment
			Anodic treatments
			Plating
			Corrosion treatments
	2	2	Protective treatments and finishes
			Surface finishes

			Fits and clearances
			Thread forms
Overhaul activity	1	2	Cylinder and piston assemblies
			Cooling baffles – hottest cylinder
			Main casings
			Rear covers
			Gear trains
			Camshaft and valve operating mechanisms
			Crankshaft, connecting rods – bearings
			Lubrication systems–passages, jets, pumps, pressure relief valves, coolers, thermostatic valves, filters and strainers
			Sealing-slinger rings, and mechanical flow control
			Crank cases, rear covers, sumps
			Engine mounting provisions
			Governor drive provision
			Induction and exhaust manifolds
			Reduction gears, assemblies and housings
			Superchargers or turbochargers
			Carburettor/injection systems
			Hoses and pipes
			Electrical wiring
			Ignition harness
Non-Destructive Testing	2	-	Eddy current, ultrasonic, X-ray or gamma ray, magnetic particle
			Techniques – status and approval
			Approved NDT organisations
			Interpretation of results
			Certification of inspection completion or acceptability of the condition found

Welding/Brazing	2	-	Preparation – fluxes, welding or brazing rods
			Expansion, contraction effects and control
			Hollow parts – internal protection
			Welding methods: gas, arc, resistance welding
			Brazing and hard soldering methods
			Approval of welders
			Inspection of welded or brazed joints
Release, Preservation, Storage and Transportation	2	-	Log Books: certification, reports, references, recording of parts, limits, concessions, modifications, alternate parts, mandatory modifications and inspections
			Service information leaflets, etc
			Lifed parts, salvage schemes or oversized parts
			Inhibiting: internal, external, injectors, carburettors, turbochargers
Systems:			
(1) Carburation and induction	1	2	Air intake – normal or alternate – filtering
			Manifolds
			Anti-icing provision
			Float type and injection systems
			Engine driven fuel pumps
			Priming systems
			Mixture, idle cut-off or throttle control
(2) Ignition	1	2	Magnetos
			Ignition harness
			Spark plugs – reach variations, operating temperature – long life
			Switch control
			Timing (internal or external)
			Advancing and retarding mechanisms

			Screening
			Starting aids – impulse couplings and ignition boosting
(3) Starting	1	2	Starter motors – manuals, Bendix, solenoid, pre-engaged – engagement methods
			Non-engagement indication and effects
			Starter relays
			Earth straps
			Cooling
			Effects on battery
(4) Fire Protection and Indication	1	2	Extinguishant, bottles, cartridges, 'life control
			Detection systems and warnings
			Two shot provision
(5) Lubrication	1	2	Wet and dry sump systems
			System arrangement
			Pressure control
			Effects of hot and cold weather
			Filtering
			Straight, detergent, ash dispersant oils
			Engine condition assessment using oil system analysis
			Oil coolers- temperature control
			Hoses, rigid pipes, internal passages, splash – oil jet
			Cooling functions of the oil system
(6) Supercharging/ Turboch-arging	1	2	Directly driven and exhaust drive superchargers
			Manual and automatic control
			Lubrication and hydraulic power
			Controls and indication
			Automatic control systems
(7) Aircraft Fuel	1	2	Tanks, cells and integral systems
			Fuel tank heating and monitoring
			Venting
			Fuel pumps – electrical
			Fuel grades and quality
			MOGAS
			Water contamination – drains
			Filtering
			Controls and indication

(8) Engine Controls	1	2	Throttle
			Electronic controls
			Mixture
			Propeller
			Alternate air
			Manual controls for turbocharger
(9) Engine Instruments	1	2	Manifold pressure
			Rotational speed
			Pressure and temperature
			Cylinder head temperature
			Exhaust gas temperature
			Electronic Condition Monitoring
(10) Diagnostic Tools	1	2	Equipment
			Use and analysis

Module 7 Category 'C' – Fixed and Variable Pitch Propellers

Syllabus Subject	Level		Details
	WTR	TR	
Principles, Termino-logy, Definitions and Laws	1	-	Constant Speeding
			Pitch variation
			Ground and flight functioning characteristics
			Power conversion
			Blade forces: aerodynamic and centrifugal
			Aerofoil aerodynamic principles
			Pitch coarse/fine, high/low, reverse
			Feathering
			Vibration characteristics
			Turbine engine installation propeller systems
Constructional Arra-ngement	1	2	Pitch change mechanism single/double acting
			CSUs or governors
			Spinners

			Balance control
			Materials
			Diameter – minimum and maximum
			Pitch stops – fixed, centrifugal, manual and electrical
			Protective finishes – contour control
	1	3	Damage acceptance areas
			Cropping
	1	2	Attachment and assembly methods
			Oil transfer – governor, propeller or sump
			Safety visibility
Automatic and Manual Pitch Control Systems	1	2	Pilot control and governor sensing
			Feathering
Ice Protection	1	2	Liquid and electrical systems
Turbine Engine Application	1	2	Auto-feathering
			Synchronising or synchrophasing
			Braking
			Automatic and manually controlled pitch limiting systems
			Beta control
			Permitted balancing

Module 8 Category 'C'– Turbine Engines in Aeroplanes, Rotorcraft and Airships

Syllabus Subject	Level		Details
	WTR	TR	
Principles, Terminology Definitions and Laws	1	2	Gas flow path – temperature, velocity and pressure
			Compression
			Combustion
			Turbine Power extraction

			Effects of atmospheric variations in temperature, density, pressure altitude on engine and on engine or aircraft combination
			Single shaft, two and three shaft engines
			Centrifugal and axial flow compressors
			Fan engines
			By-pass engines
			Water or water methanol injection
			Power turbines
			Surge or compressor stalling
			Propeller turbines
			Gas producers
			APU applications
			Thrust reversal
			Power assessment
Constructional Arrangement	1	2	Casings, shafts, bearings, accessories drive
			Air intakes and compressors
			Combustion section
			Turbines and exhaust
			Materials
			Modular construction
	1	3	Engine inspection capability and condition assessment provision
	1	3	Principles of ‘condition monitored’ and ‘on condition’ maintenance programmes
	-	2	Supersonic flight air intake geometry control systems
Propeller and Shaft Power Provision	1	2	Gas producers
			Reduction gearing
			Power and auxiliary drive
			Rotational speed and power control, safety systems

	1	1	Principles of torque, power, rotational speed in power transmission by rotating shafts
Systems:			
(1) Thrust Reversing	1	2	General arrangements
			Control/interlocks
			Safety features
			Operating systems – hydraulic/ pneumatic mechanical
			Turbine and fan applications
(2) APUs	1	2	General arrangements
			Intake and exhausts systems – door operation
			Load control
			Electrical output control and management
			Speed control
			Fuel control
			Safety features
			Ground, flight or altitude-limiting factors
			Mounting
			Fire protection and indication
			Bay cooling
			Ground running
(3) Fuel Control	1	2	Principles – parameters
			Mechanical or electronic control
			Power speed – control and limiting
			Temperature and power factors
			Burners–primary and secondary provision
	-	2	Burners–shaft injection, torch ignition
	1	2	Governor speed sensing
(4) Fuel Systems	1	2	Tanks – cells and integral systems
			Refueling/defuelling, crossfeed, jettison, venting, transfer

			Scavenging – jet pumps
			Boost pumps, backing pumps
			LP or HP valves and control
			Tank selection
			Internal or external pipes, hoses, connectors
			Fuel types
			Static electricity–effects and control
			Leak assessment and control
			Fuel quantity indication – 'Level Sticks'
			Water contamination – effects and control
			SG, Density, volume or weight
			Filtering and heating
			Fuel systems in pressurized cabin areas
(5) Water Injection	1	2	Water or water methanol applications
			Sensing, control and safety provision
			Power effects
			Tankage
			Replenishing or dumping
			Pumps
			Effects on fuel control
			Pipes and pipe lines
(6) Lubrication	1	2	Tanks, storage, venting, contents indication
			Pressure or scavenge pumps
			Filters, screens and magnetic plugs/chip detectors
			Pressure or flow control
			Heat exchangers oil, fuel, oil or air
			Sealing-labyrinth seals, carbon seals, etc.
			Overboard drains – drains systems
			Lubrication of mains bearings, accessories and gear trains

			Supply to propeller systems
			Contamination by hydraulic fluid or fuel
			Types of oil
			Internal or external pipes, hoses and passages – effects of heat
			Use of oil for ice protection – intake and fuel control
(7) Cooling, Sealing and Bleed Air Services	1	2	Internal cooling, external cooling, sealing air
			Overboard dump – temperature monitoring
			Off-takes for other services – air conditioning, anti-icing, equipment drive, pressurizing of hydraulic reservoirs, water systems, etc.
			Centrifugal filters
(8) Surge Protection and Airflow Control	1	2	Bleed valves – operating systems
			Variable inlet guide vanes – scheduling, operating systems
			Surge sensing
			'Surge margins'
	-	2	Supersonic flight air intake geometry control
(9) Ice Protection	1	2	Hot air systems–struts and intakes
			Electrical systems – engine and intakes
			Use of oil and air bleeds
			Pressure sensor heating
			Control and indication
(10) Fire Protection	1	2	Fire detection
			Overheat warning
			Fire extinguishing
			Bay and zone isolation
			Fire walls, bulkheads, cladding
			Fire wires, detector units
			Single/dual detection
			Extinguishants

			First and second shot capability
			Warnings and indications – lights, aural warnings, fuse types, squib test
			'Bottle gone' indicators
			Operating systems
			Over pressure
			Cartridges – life control
			Electric and electronic systems
(11) Ignition	1	2	High energy ignition systems
	-	2	Torch ignition
			Glow plug systems
	1	2	Igniter plugs and leads
			Operation inside and outside the starting cycle
(12) Starting	1	2	Starting cycle
			Initiation – HP valves, termination, bleed valves, starter valves, power lever, self sustaining speeds
			Starter motors – electrical, pneumatic, starter/generators – HP air, impingement air
			Clutch provision, overspeed sensing
			Manual operation starter cooling /resting
			Ground power electrical/ pneumatic provisions
(13) Controls	1	2	Power/throttle/thrust reverse
			HP/LP valve controls – manual and electric
			Condition control systems
			Propeller control
			Auto control of throttle
			Control runs
	-	1	Electronic control systems

(14) Pods, Pylons, Cowlings and Mountings	1	2	General arrangements
			Services and controls – input/exit
			Materials
			Venting
			Zone demarcation
			Mountings
			Pylon and pod structural features
			Torque, vibration, expansion provisions
			Bay venting
			Cooling air intakes
(15) Electrical	1	2	a.c. generators – CSDs/IDGs
			Starter/generators
			Starter motor high current circuits
			CSDs – principles of operation, disconnect/ reconnect, lubrication/ hydraulic operation, filters, coolers
(16) Instruments	1	2	Rotational speed indication; a.c. generator and pulse probe systems
			Temperature and pressure systems
			Pressure ratio systems
			Turbine temperature systems
			Instrument system amplifier
			Fuel flow indication
			Torque indication
			Fuel contents/oil contents- electrical and electronic
			Vibration indication
Ground Handling	1	2	Storage and inhibiting
			Spare engine carriage
			Ground running – noise control – power checking
			Functional checks of engine associated services

Syllabus Subject	Level		Details
	WTR	TR	
Theory of Flight and Control	1	2	Rotor disc: forces acting, lift, drag centrifugal force, weight, rotor useful force, phase lag; advance angle non-constant speed drive (Hookes Joint) effect
			Articulate/semi-rigid/rigid rotors
			Flapping/dragging/feathering
			Climbing/losing height/ horizontal flight
			Main and anti-torque rotors– control inputs–cyclic and collective
			Effects of aircraft speed on rotors
			Directional control
			Translational lift/inflow/ground effect
			Vortex ring effect
			Retreating blade stall
			Reverse flow
			Auto-rotation; auto-rotative force/blade section
			Auto-rotation rev/min
	-	2	Twin rotors
Constructional Arrangements	1	2	Rotorcraft structures, load paths, vibration effects
			Landing gear configurations: skids/wheels/floats
			Fuselages, tail cones, pylons, engine mounts
			Gearbox and transmission mountings
			Doors and windows

Systems:			
(1) Flying Controls	1	2	Collective/cyclic/directional
			Hydraulic
			Rotor heads – main and tail rotor
	1	2	Articulated, rigid, semi-rigid, teetering
			Swash plate/spider control input methods
			Blades: construction and materials; balancing: static, dynamic, span wise, chord wise
			Tracking: flag and in-flight methods
			Tabs/trailing edge bending
			Vibration – effects and analysis
			BIM indicators
			Automatic Pilots/Autostabilisers – Control interface
			System components – component replacement and subsequent testing
(2) Ice and Raid Protection	1	2	Windscreen wipers
			Electrically-heated windscreens
(3) Heating and Ventilation	1	2	Exhaust heat exchangers
			Ram air
			Ventilation fans
Transmission systems	1	2	Engines to rotors: shafts, clutches, free wheel units; reduction gearboxes; main transmission/ gearboxes, combining gearboxes
			Tail rotor drive: drive shafts, intermediate gearboxes, tail rotor gearboxes
			Lubrication systems: oils, coolers, cooling fans, filters, magnetic plugs, chip detectors, pumps, pressure control

			Universal drive provision
			Splined shafts, type of gears – tooth pattern
			Instrumentation
			Rotor brake systems
Equipment	1	2	Hoists and winches
			External load carrying
			Flotation
			Survival systems
			Specialised role equipments, aerial spraying, cameras
Instruments	1	1	ADI, HIS
			Flight recorders
	1	2	HUMs

Module 10 Category 'A' & 'C'– Airships

Syllabus Subject	Level		Details
	WTR	TR	
Principles of Lift	1	-	Bodies immersed in fluids
			Gases: free to expand/constant volume/constant temperature /constant pressure
			Mixture of gases in a containing vessel
	2	-	Centre of gravity, centre of buoyancy, static heaviness, static lightness, static trim
			Ballonet ceiling, pressure height
Superpresssure			Superpresssure, superheat
			Porosity
			Equilibrium
			Ballast-shot/water
Theory of Flight and Control	1	-	Aerodynamic lift, aerodynamic balance
			Stability and control
			Free ballooning
			Fins, rudders, elevators
			Tabs: balance/servo/trim/spring

			Powered flying controls
Envelope	2	-	Materials: fabrics, Kevlar
	1	-	Ultra-violet light effects
			Gas-tight membranes
			Ballonets, gases, load curtains, shear curtains, support cables, gas valves, air valves, entry ports, inspection domes, charge adaptors, load patches, handling lines, nose cone
			Charging, purging, porosity checks
			Lightning protection
			Airs systems: ram air scoops, ballonet fans, dampers, transfer fans
Gondola	2	-	Main Structures
			Materials: Kevlar laminate, fibrelam, sandwich panels, metal skin frames and stiffening
	1	-	Moulding/bonding techniques
			Support cables, support cable attachment, bulkheads, equipment attachment
			Furnishings
			Doors, windows and hatches
			Fire protection – skinning
			Lightning protection
Systems:			
(1) Flight control	1	-	Fins, rudders, elevators
			Operating systems and surfaces – manually/power operated
			Trim operating systems – manual and electric
(2) Ice and Rain Protection	1	-	Windscreen wipers
(3) Heating and Ventilation	1	-	Exhaust heat exchanges
			Ventilation system

(4) Vacuum/Pressure	1	-	Supply and associated system
(5) Landing Gear	1	-	Geometric arrangement
			Structural arrangement
			Castering/pivoting/locking
			Shock absorbers
			Weight sensing/measurement
Ducted Propellers	1	-	Principles of operation
			Propeller forces: aerodynamic/ centrifugal
			Pitch variation/control
			Positive/negative vectoring
			Power conversion
			Control systems: electronic control, emergency forward coarse selection
			Balance
			Clutches
			Materials
			Protective finish: contour control, visibility
			Duct pivoting systems: drive and control, motors, limit control, gear boxes, inter-connection, emergency manual
Ground Handling	1	-	Attaching to/releasing from/mast
			Ground power
			Fuelling
			Ballasting
			Helium: charging, purifying, leak testing
			Pressure watch techniques
			Mooring – mobile/portable
			Engine running
			Hangaring
			Adverse weather

Module 13 Human Performance

Syllabus Subject	Level		Details
	WTR	TR	
General	2		The need to take human factors into account
			Incidents attributable to human factors/ human error
			'Murphy's' Law
Human Performance and Limitations	2		Vision
			Hearing
			Information processing
			Attention and perception
			Memory
			Claustrophobia and physical access
Social Psychology	1		Responsibility: individual and group Motivation and de-motivation
			Peer pressure
			'Culture' issues
			Team working
			Management, supervision and leadership
Factors Affecting Performance	2		Fitness/health
			Stress: domestic and work related
			Time pressure and deadlines
			Workload: overload and underload
			Sleep and fatigue, shiftwork
			Alcohol, medication, drug abuse
Physical Environment	1		Noise and fumes
			Illumination
			Climate and temperature
			Motion and vibration
			Working environment
Tasks	1		Physical work
			Repetitive tasks

			Visual inspection
			Complex systems
Communication	2		Within and between teams
			Work logging and recording
			Keeping up to date, currency
			Dissemination of information
Human Error	2		Error models and theories
			Types of error in maintenance tasks
			Implications of errors (i.e. accidents)
			Avoiding and managing errors
Hazards in the Workplace	2		Recognizing and avoiding hazards
			Dealing with emergencies

Module 21 Basic: Electrical Equipment and Systems

Syllabus Subject	Level		Details
	WTR	TR	
Batteries	1	-	Principles of primary and secondary cells
	2	-	Lead-acid types
			Ni-Cad types
	2	3	Methods of charging batteries in aircraft
	2	-	Capacity testing, storage
Direct Current Machines	2	-	Basic laws and principles
			Types and characteristics
			Control
Direct Current Generation	1	2	Voltage regulation
			Control
			Load sharing
			Paralleling
			System layout
			Interlock circuits

Power Conversion Equipment	1	2	Static and rotary inverters
			Transformer rectifier units
Fire Protection	1	2	Detection systems
			Fire and overheat warning
			Smoke detectors – principles and applications
			Overheat sensors
			Extinguishing systems
			Warnings
Flight Controls	1	2	Motors and actuators – clutches and brakes
			Limit switches, micro switches and proximity detectors
			Power control units
			Flap motors protection and control
			Trim motors
Fuel Systems	1	2	Boost pumps control and indication
			Jettison systems
			Refuel/defuel systems
			Fuel heaters
			Crossfeed, supply and shut-off valves-normal and emergency
Hydraulic Systems	1	2	Pump control and isolation
			Pressure switches
			Overheat warnings
			Electrically-operated priority valves
			Fluid reservoir components
			Low level warnings
Landing Gear Systems	1	2	Actuation motors – selection and control
			Indication – proximity sensors micro switches
			Air/ground sensor systems
			Anti-skid systems – operation, control and override
			Automatic braking systems – inputs; control and override

Lighting Systems	1	2	External systems: landing, navigation, anti-collision and inspection, etc.
			Internal systems: normal and emergency, fluorescent tubes, reading and passenger information systems, multiplex function
Pneumatics	1	2	Control–indication and protection
Engine and Propeller Control	1	2	Fuel control valves
			Temperature and speed limiting systems
			Propeller feathering controls
			Electronic engine control
Starting and Ignition	1	2	System types
			Control
			Principles of operation of high energy ignition units
			Aircraft and engine applications and related systems, e.g. stall warning
Alternating Current Machines	2	-	Basic laws and principles
			Types and characteristics
			Control
Alternating Current Power Generation	1	2	Constant and variable frequency
			Constant speed drive units
			Paralleling
			Load sharing
			Load shedding
			Generator control unit
			Voltage regulation
			Load controller
			Differential protection
			F a u
			V o l t a g

Alternating Current Power Distribution Systems	1	2	Bus-bar layouts
			Split and parallel systems
			Transfer relay interlocks
			Emergency conditions
			APU and GPU interlocks
			Warnings
			Maintenance panels
Air Conditioning Systems	1	2	Control
			Indication
			Protection
Ice and Rain Protection Systems	1	2	Windscreen heating: control, indication and failure
			Engine/propeller and airframe anti-ice protection: thermal, electrical and pneumatic
			Warnings and indications
			Overhead indications and protection
			Ground operations
			Windscreen wiper, washer and rain repellent systems
			Sensor protection – angle of airflow, pitot head, static plate and temperature probes
			Waster water heaters – thermal anti-icing protection
			Aerial heaters

Auxiliary Power Units	1	2	Starting, control, protection
			Power generation
			Fire protection
Ground Power Supplies	-	2	Interlocks and protection of aircraft supplies
			Control
Centralised Warning and Indication Systems	1	2	Inputs
			Output warnings
			Priority philosophy
Galley/Toilet Services	1	-	Power supply and protection
			Water heating
			Equipment

Module 22 Basic: Instruments Category 'X'

Syllabus Subject	Level		Details
	WTR	TR	
Pitot-Static Systems and Instruments	1	-	Atmospheric physics, temperature lapse rate, Mach number computation
	2	-	Airspeed indicator, altimeter, vertical speed indicator, and machmeter
			Servo altimeter
	1	2	Pitot probes, static plates and heaters
	2	2	Pipelines and flexible hoses
	1	2	Drain straps, associated equipment
			Altitude and airspeed switches
Rate of Turn and Slip Indication	1	2	Rotor speed; display
Vacuum System	1	-	Sources
	1	2	Control and adjustment
			Indication
Pressure Measurement	1	-	Sensing elements; capsules, bellows, Bourdon tubes, transmitters
			Displays

Temperature Measurements	1	2	Variable resistance
			Thermocouplers; compensation, limits and values; servo indicators; control system inputs
Rotational Speed Measurement	1	2	Direct drive indicators; tacho-generator and indicator systems; pulse probe systems
			Displays
Position Measurement	1	2	d.c. and a.c. systems
Quantity Measurement	1	2	Direct reading
	2	2	Electrical and electronic systems
	1	2	Compensation
			Power supplies
Flow Measurement	1	2	Indicators
			Transmitters
			Power supplies
Compasses	1	2	Direct reading compass installation; safe distance
			Flux detectors and remote sensors remote system components
			Heading reference outputs
Air Data Computation	2	-	Sensors and inputs
			Signal processor: mechanical, electrical and electronic
			Signal outputs and displays
Reduced Vertical Separation Minima	1	2	Signal sources and interface with other systems
	1	2	Maintenance practices
Flight Path Computation	2	2	Signal sources, radio inputs
	1	2	Modes, computation
			Displays
Electronic Display Systems	1	1	CRT; LED; LCD displays
	1	2	EADI; EHSI; symbol generators
			Control panels
			Comparators and monitors

			Engine indicating and crew alerting systems
			Electronic centralised aircraft monitors
Flight Data Recorders	1	2	Requirements
	1	2	Sensors and inputs
			Cockpit Voice Recorder inputs
			Interface with aircraft systems
			Signal processing
			Entry panels
			Computer principles
			Data recording methods
			Retrieval and verification
	1	1	Readout
	1	2	Failure monitors
Inertial Navigation Systems and Inertial Reference Systems	1	1	Basic principles
			Platform construction
			Computation
	1	2	Displays and interface with aircraft equipment
			Mode selector and CDU
			Failure/fault indicators
			Power supplies and cooling
Ground Proximity Warning Systems	2	2	Modes
			Warnings
	1	2	Inputs and interface with other aircraft systems
	1	1	Computation
			Monitors
			Failure indications
Vibration Measurement	1	2	Types of pick up
			Signal conditioning
			Displays
			Alarm levels and warnings

Compass Compensation	1	-	Base survey techniques
			Compass swinging areas
			Aircraft magnetism
			Terrestrial magnetism – variation
			Methods and procedures for swinging compasses
	3	-	Deviation: calculations and effects on a compass
			Compensation and adjustment procedures
Digital Flight Systems	1	1	Flight management systems

Module 23 Basic Gyroscopes and Servomechanisms Category 'X'

Syllabus Subject	Level		Details
	WTR	TR	
Gyroscopes	1	-	Basic principles
	1	2	Types and methods of operation – vacuum, electrical, or laser
	2	-	Handling care
Electronics	1	2	Transistors
			Biasing, simple circuit arrangements
	1	2	Amplifiers
			Signal amplifiers, feedback
Attitude sensing	1	2	Errors, correction
			Remote gyros, interconnection and transfers
			Limits
Direction sensing	1	2	Errors, compensation
			Remote gyros, interconnection and transfers
Rate sensing	1	2	Alignment
			Rotor speeds
Accelerometers	1	2	Basic principles
Synchros	1	2	CTs, Differential, Torque synchros and resolvers

Servomechanisms	1	2	Rate and position sensing and control
			Integrators
			Response and damping
			Power requirements
			Clutches
			Override and lockout protection
			Null and loop error sensing
			Synchronisation systems
			Force rebalance systems
Digital Techniques	2		Logics – basic gate functions and truth tables
	1		Microprocessors – block diagram
			Digital computing techniques
			Parallel and series operation
			Volatile/non-volatile data storage
		2	Multiplex systems
High Intensity Radiated Fields (HIRF)	1	1	Effect on sensitive systems, principles and methods used to minimize HIRF effects
Fly by Wire	1	1	General principles

Module 24 Automatic Pilots - Aeroplanes Category 'X'

Syllabus Subject	Level		Details
	WTR	TR	
Theory of Flight (Fixed Wing)	1	2	Forces on the aircraft
			Stability – dihedral, sweepback, etc
			Control axis
			Primary control surfaces – operation and effect on the aircraft
			Secondary controls
			Forces during turns
			Functions of trim tabs, balance tabs and servo tables

			High speed buffet and stall conditions
			Auto-pilot control axis
			Auto-stabilisers – wing levellers
			Co-ordinated turns, aileron/rudder cross feed
			Versine generation and application
			Sideslip monitors – Slip and skid in a turn
			Turbulence penetration and the effect on autopilot control
Yaw Dampers	1	2	Dutch Roll phenomenon
			Yaw sensing
			Yaw signal processing
			Synchronisation
			Series and parallel systems
			Cockpit indication
			Aileron/rudder control interaction in turns
			Rudder PCU, LRUs
			Interlocks with autopilot systems
Pitch Trim Systems	1	2	Longitudinal axis stability
			High speed tuck
			Mach No. inputs
Mach Trim	1	2	Mach trim actuators computation
			Connections with aircraft controls
			Warnings
Alpha Trim	1	2	Angle of attack sensing
			Computation
			Interface with other aircraft systems: e.g. N1 computers – stall warning systems
			Flight directors
Auto-Stabilisers	1	2	Trim actuators – control and safety interlocks
			Speed change systems for trim actuators

			Interlocks
			Elevator/stabiliser interaction
C of G Trimmers	1	2	Computation
			Indication
Demand Signals	1	2	Control wheel steering systems
			Touch wheel steering systems
Automatic Throttle Systems	1	2	Control input
			Related engine controls
			Sensors
			Engine coupling units: clutches and servo-motors
			Override and safety considerations
			Modes of operation
			Electronic engine control: microprocessor inputs and control
Automatic Landing Systems	1	2	Principles, requirements and approach categories
			Types of systems operation: dual or triple channel
			System operation on approach
			Monitors and failure conditions
			Roll-out control
			BITE
	1	3	Category downgrade and reinstatement procedures
Digital Flight Systems	1	2	Flight management systems

Module 25 Automatic Pilots – Common - Category 'X'

Syllabus Subject	Level		Details
	WTR	TR	
Error Signals	1	2	Rate system – errors and control
			Displacement system – errors and control
			Heading and course error inputs
			Radio beam deviation inputs
			Attitude inputs

			CADC/autopilot interface – e.g. q or % adaptation
			Sideslip sensors and monitors
Signal Processing	1	2	Typical channel signal flow path
			Buffer amps
			Input signal modulation
			Summing points
			Signal sensors and switching functions
			Integrators
			Limiters
			Gain programmes
			Dual channel monitors
			Voter systems
Demand Signals	1	2	Mode selectors
			Control display units
			Turn controllers
			Control column transducers
			Command override systems
			Mode compatibility
			Mode annunciators
			Failure and disconnect lights and aural warnings
			Interlocks – pre and post-engage
			Pitch attitude trim
			Roll out/heading-hold, engage
			Synchronisation
			Trim monitors and indicators
			Altitude hold inputs
			Vertical speed control
			Mach/IAS hold
			Altitude acquire or change systems
Command Signal Outputs	1	2	Power control units – line replaceable units
			Solenoid valves
			Transfer valves
			Position sensors

			Servomotors - construction, interconnection with control runs
			Clutches – torque settings
			Brakes
			Tachogenerators –feedback and damping
			Position feedback - indication
			Torque limiting
			Hardover sensing – disconnection
			Jam detection
			Runway conditions – disconnection
			Pilot override - disconnection

Module 26 Automatic Pilots – Rotorcraft- Category 'X'

Syllabus Subject	Level		Details
	WTR	TR	
Theory of Flight (Rotorcraft)	1	2	Rotor disc: forces, lift, drag, centrifugal force, weight, phase lag
			Articulated/semi-rigid/rigid rotors flapping/dragging/feathering
			Vertical and translational flight
			Main and anti-torque rotors, control inputs cyclic, collective, rudder pedals
			Directional control
			Autorotation
			Forward speed effects
Command Outputs	1	2	Actuators
			Indicators
Trim Systems	1	2	Manual/Automatic
			Indication
Stability Augme-ntation Systems	1	2	Actuators
			Indicators
			Computation

Module 30 Compass Compensation

Syllabus Subject	Level		Details
	WTR	TR	
Compass Compensation	2	-	Base survey techniques
			Compass swinging areas
			Aircraft magnetism
			Terrestrial magnetism – variation
			Methods and procedures for swinging compasses
	1	-	Flux valve operation
	3	-	Deviation: calculations and effects on a compass
			Compensation and adjustment procedures
	1	-	Various compass types

Module 31 Radio Communication and Navigation – Category 'R'

Syllabus Subject	Level		Details
	WTR	TR	
Radio Theory	1	-	Propagation of radio waves
			Polarisation
			Radiation patterns
			Transmitters and receivers
			RF Amps, IF Amps
			Oscillators, frequency synthesisers
			Frequency multipliers
			Mixers, detectors, BFO, AGC
			Noise limiters, muting circuits, audio amplifiers
			Modulators, RF power amplifiers matching units
			Filters and tuned circuits
Interference	2	-	Principles and methods used to minimise the effects of conducted and radiated interference

			Methods used to minimise the effects of lightning strikes and static on aerials
Aerials and Feeders	2	-	Diplexers, baluns and matching stubs
			Fixed and variable matching arrangements
			Locations and types of aerials – communication and navigation
			Bandwidth and effective height of an aerial
Communication	2	-	Calculation of standing wave ratio
			Control and monitoring circuits
Audio Systems	2	-	Intercommunication
			Audio mixing and distribution systems
			Public address and entertainment systems
			Headsets and microphones
Cockpit Voice Recorder	2	-	Signal sources
			Control circuitry: hot microphone
			Requirements
VHF/HF Communications	2	-	Airborne installations
VOR/ILS	1	-	Ground station signals
	2	-	Airborne installations
			Control
			Monitors
			Indicators
			Loading
			AFCS and instrument interface
Marker	1	-	Ground installations
	2	-	Airborne systems
Automatic Direction Finding	2	-	Receiver
			Loop and sense aerials and feeders
			Bearing errors and correction devices
			Loop swings

Satellite Communica-tion and Navigation (GPS) Systems	1	-	Airborne installations
			Receiver, computer
	2	-	Displays
			Interface with other systems
Flight Compartment			
Electronic Display Systems	1	-	EADI; EHSI; symbol generators
			Control panels
			Comparators and monitors
Microwave Landing Systems (TRSB)	1	-	Receiver, computer
			Interface with other systems
RNAV	1	-	Computer
			Interface with other systems
			Indications

Module 32 Radar Systems – Category 'R'

Syllabus Subject	Level		Details
	WTR	TR	
Pulse Techniques	1	-	Radar transmitter/receiver
			Pulse modulation
			Peak power, average power
			Duty cycle, pulse shape, pulse width
			Pulse rise time and repetition frequency
			Range accuracy and resolution
			Receiver bandwidth
			Noise
Primary Radar	2	-	Weather radar:
			Control and monitoring circuits
			Indicators; displays
			Scanners; waveguides
	2	-	Doppler:
			Aerials

			Indicators
			Interface with other equipment
	2	-	Radio altimeters:
			Pulse and FM, CW systems
Secondary Radar	2	-	DME:
			Indicators
			Control and monitor circuits
			Interface with other aircraft systems
			ATC Transponders:
			Instrument system interface
			Control and monitor circuits
	1	-	TCAS:
			Indicators
			Control and monitor circuits
			Interface with other aircraft systems

FIFTH SCHEDULE

OFFENCES AND PENALTIES

Regulation 197(8) and (9)

Reg. No.	Title	part
9	Validity of Licences	A
10	Decrease in medical fitness	A
13	Curtailment of privileges of pilots	A
30(3),(4),(6),(7)	General requirements for pilot licences, ratings and authorisations	A
32(1)	Solo flight requirements	A
33(2)(3)and(4)	Privileges and Limitations	B
40(1),	PPL: Privileges and limitations.	A
53(3),(4)	ATPL: Privileges and limitations	A
63(2)	Type ratings	A
66	Night rating: general eligibility requirements	A
70(1)	Instrument rating: general eligibility requirements	A
80	Trainee Records	A
83(2),(3),(4),(5)(6)	Flight instructor: limitations and qualifications.	A
88	Flight engineer: licences and ratings required.	A
96(1)	ATC: Required licences and ratings or qualifications.	A
101(1)	ATC: Privileges and limitations.	A
102(3)	Privileges of ATC ratings.	A
104	ATC: Maximum working hours.	A
105	Responsibilities over fatigue	A
106(1),(3)	Prohibition of unlicensed air traffic controllers.	A
124(4)	ARS: Privileges and limitations.	A
125	ARS: Display of authorisation.	A
126	ARS: Surrender of authorization.	A
131	CCMC; Required certificate, ratings and qualifications.	A
132(1)	General eligibility requirements.	A
141	Aviation medical examiner submission of signed medical evaluation report.	A
142(1)	Issue of medical certificate.	A
144(1)	Medical confidentiality.	A
148	Prohibition of medical certification.	A
149	Medical requirements.	A

159(1)	Ear and related structures.	A
161(1),(3)	Cardiovascular: general.	A
162	Blood pressure and circulation.	A
164	Neurological requirements.	A
165(1)	Respiratory capability.	A
167(1)	Vestibular apparatus	A
168	Bones, muscles and tendons.	A
169	Endocrine system	A
170	Diabetic applicant.	A
171	Gastrointestinal and digestive tract.	A
172(1),(3)	Kidneys and urinary tract.	A
183	Use of psychoactive substances.	B
184(2),(3)	Drug and alcohol testing and reporting.	B
185	Inspection of licences, certificates and authorisations.	A
190(1),(2),(4),(5)	Use and retention of documents and records.	A
191	Report of violation	A
192	Enforcement of directions.	B

ABRAHAM BYANDALA
Minister of Works and Transport

Cross references

The Civil Aviation (Airworthiness) Regulations, 2014. S.I. No. 62 of 2014.
The Civil Aviation (Approved Maintenance Organisations) Regulations, 2014. S.I. No. 67 of 2014.
The Civil Aviation (Approved Trainning Organisations) Regulations, 2014. S.I. No. 59 of 2014.
The Civil Aviation (Operation of Aircraft) Regulations 2014. S.I. No. 64 of 2014.
The Civil Aviation (Rules of the Air and Air Traffic Control) Regulations 2006. S.I. No.58 of 2006.