LEGAL NOTICE NO. 37

REPUBLIC OF TRINIDAD AND TOBAGO

THE CIVIL AVIATION ACT, 2001

REGULATIONS

MADE BY THE AUTHORITY WITH THE APPROVAL OF THE MINISTER UNDER SECTION 33 OF THE CIVIL AVIATION ACT

THE CIVIL AVIATION [(NO. 1) GENERAL APPLICATION AND PERSONNEL LICENSING] (AMENDMENT) REGULATIONS, 2007

PART I

PRELIMINARY

Citation

1. These Regulations may be cited as the Civil Aviation [(No. 1) General Application and Personnel Licensing] (Amendment) Regulations, 2007.

Interpretation
L.N. Nos. 44 and 100 of 2004

2. In these Regulations "the Regulations" means the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004.

Regulation 2 amended

3. The Regulations are amended in regulation 2 by—

(a) inserting in the appropriate alphabetical sequence, the following definitions:

" "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 aircraft flight manual or under the air operator certificate;

"airship" means a power-driven lighter-than-air aircraft;

"airmanship" means the consistent use of good judgment and well-developed knowledge, skill and attitude to accomplish flight objectives;

"competency" means a combination of knowledge, skill and attitude 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 the recognition of alternative means or prior qualifications;

"error" means action or inaction by the flight crew that leads to deviation from organizational or flight crew 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 mitigate the probability of further errors or undesired aircraft condition;

"flight dispatcher" means a person who holds a flight dispatcher licence or certificate from another Contracting State;

"flight operations officer" means a person designated by the operator to engage in the control and supervision of flight operations who is qualified in accordance with the Civil Aviation [(No. 1) General Application and Personnel Licensing] Regulations, 2004 and who supports, briefs and assists the pilot in command in the safe conduct of the flight;

"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 flight deck 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 flight deck 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; and

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

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

"pilot in command under supervision" means a co-pilot performing, under 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;

"quality system" means documented organizational policies and procedures, internal audit of those policies and procedures, management review and recommendation for quality improvement;

"threat" means events or errors that occurs beyond the influence of the flight crew, increase operational complexity and which must be managed to maintain the margin of safety; and

"threat management" means the process of detecting and responding to the threats with counter-measures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired aircraft condition;";

(b) deleting the definition of "cross-country" and substituting the following definition:

" "cross-country" means a flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures;"; and

(c) deleting the words "approved Aviation Training Organization" and "Aviation Training Organization" wherever they occur and substituting the words "Approved Training Organization".

Regulation 3 amended

4. The Regulations are amended in regulation 3, by inserting after subregulation (1), the following new subregulation:

"(1A) Notwithstanding the requirements of the Meteorology Act, 2004, a person involved in the conduct of air and ground operations in domestic and international civil aviation activities in Trinidad and Tobago shall use the units specified in Schedule A for all aspects of his operations.".

Schedule A

Regulation 5 amended

5. Regulation 5 of the regulations is amended in subregulation (1)—

(a) in paragraph *(a)*, by inserting after the words "prescribed form" the words "on first quality paper or other suitable material including plastic cards";

(b) in paragraph *(c)*—

(i) by deleting the words "contain—" and substituting the words "contain the following information clearly shown so that the privileges of the licence and validity of ratings can be easily determined:"; and

(ii) in subparagraph (xiv), by inserting after the words "for privileges," the words "including from 5th March, 2008, an endorsement of language proficiency, and a complete enumeration of the particulars in which the international standards are not satisfied;".

Regulation 20 amended

6. Regulation 20 of the regulations is amended by—

(a) inserting in the heading immediately above regulation 20, the words "or Certificate" after the words "Foreign Licence"; and

(b) deleting regulation 20 and substituting the following:

"Validation of licence or certificate

20. (1) The Director General may recommend that the Authority validate a licence or certificate issued by another Contracting State, by issuing a suitable authorization to be carried with the foreign licence or certificate with such limitations and restrictions as the Director General may recommend, provided that the requirements under which the licence or certificate was issued are at least equal to the applicable standards made under the Act or Regulations made thereunder, and where he is satisfied that—

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

(b) the licence or certificate does not contain an endorsement, stating that the applicant has not met all of the standards of the Chicago Convention for that licence or certificate;

(c) the applicant does not currently hold a licence issued by the Authority under regulation 19 or any other certificate issued by the Authority;

(d) where applicable, the applicant holds a current medical certificate issued by the Contracting State which issued the licence or certificate;

(e) except as provided under regulation 189, the applicant is able to read, speak, write, and understand the English language; and

(f) where applicable, the applicant has passed the aeronautical knowledge test in air law.

(2) The validity of the authorization under subregulation (1) shall not extend beyond the period of validity of the licence or certificate.

(3) Where the Authority limits the authorization to specific privileges, the authorization shall specify the privileges of the licence or certificate which are to be accepted as its equivalent.

(4) The authorization under subregulation (1) ceases to be valid where the licence or certificate upon which it is issued is revoked or suspended.

(5) The Director General shall confirm the validity of the licence or certificate of the other Contracting State before recommending that the Authority issue an authorization for use in commercial air transport operation.

(6) The Director General shall, on request from another Contracting State, confirm the validity of a licence or certificate issued by the Authority.".

7. Regulation 22 of the regulations is amended— Regulation 22 amended

(a) in subregulation (1) by—

(i) deleting paragraph *(a)* and substituting the following:

"*(a)* category rating in the following aircraft:

(i) aeroplane;

(ii) helicopter;

(iii) powered-lift;

(iv) airship of volume more than 4,600 cubic metres;

(v) glider; and

(vi) free balloon;";

(ii) deleting paragraph *(c)* and substituting the following:

"*(c)* class ratings in the following aircraft certified for single pilot operations:

(i) helicopter; and

(ii) powered-lift;";

(iii) deleting paragraph *(e)* and substituting the following:

"*(e)* Type Ratings in the following aircraft:

(i) aircraft certified for operation with at least two pilots;

(ii) helicopters and powered-lift aircraft certified for single-pilot operation except where a class rating has been issued under subparagraph *(b)*; and

(iii) any aircraft considered necessary by the Authority;";

(b) by inserting after subregulation (3) the following:

"(4) Until 10th March, 2011, the Authority may endorse a Type Rating for aircraft of the powered-lift category on a Pilot Licence for an aeroplane or a Pilot Licence for a helicopter.

(5) The endorsement under subregulation (4) shall indicate that the aircraft is part of the powered-lift category.

(6) The training for the Type Rating in the powered-lift category shall be completed during the course of approved training and take into account the previous experience of the applicant in aeroplane or helicopter as appropriate and incorporating all relevant aspects of operating an aircraft of the powered-lift category.".

Regulation 31 amended

8. Regulation 31 of the regulations is amended by deleting subregulation (2) and substituting the following:

" (2) An applicant under subregulation (1) shall have demonstrated through an aeronautical knowledge test a level of knowledge appropriate to the privileges granted to the holder of a Private Pilot Licence and appropriate to the category of aircraft intended to be included on the licence, in the areas set out in Part A of Schedule 3.".

9. Regulation 32 of the regulations is amended in subregulation (3), by inserting after the words "the applicant shall have received dual instruction in aircraft" the words "within the appropriate aircraft category". Regulation 32 amended

10. Regulation 33 of the regulations is amended by deleting subregulation (1) and inserting the following: Regulation 33 amended

" (1) An applicant for a Private Pilot Licence under regulation 30, shall have demonstrated through a skill test, his ability to perform as pilot in command of an aircraft within the appropriate category, the relevant procedures and manoeuvres set out in Part B of Schedule 3 in the manner set out in Part C of Schedule 3, with a degree of competency appropriate to the privileges granted to the holder of a Private Pilot Licence.".

11. Regulation 34 of the regulations is amended— Regulation 34 amended

(a) by deleting subregulation (1) and substituting the following:

" (1) An applicant for a Private Pilot Licence shall, in accordance with the requirements specified in Part D of Schedule 3, have received—

(a) forty hours of flight time as an aeroplane pilot appropriate to the category and class rating sought;

(b) forty hours of flight time as a helicopter pilot; or

(c) twenty-five hours of flight time as an airship pilot.";

(b) by deleting subregulation (2) and substituting the following:

" (2) Notwithstanding subregulation (1)*(a)* and *(b)*, an applicant for a Private Pilot Licence need to have only—

(a) thirty-five hours of flight time completed during a course of approved training as an aeroplane pilot appropriate to the class rating sought; and

(b) thirty-five hours of flight time completed during a course of approved training as a helicopter pilot.";

(c) in subregulation (4), by deleting the words "may credit one of the following in an approved flight simulator or an approved flight training device" and substituting the words "may credit to the forty hours flight time under subregulation (1) or the thirty-five hours flight time under subregulation (2), one of the following in a flight simulation training device".

Regulation 37 amended

12. Regulation 37 of the regulations is amended in subregulation (2), by inserting after the words "an aircraft" the words "within the appropriate category of aircraft".

Regulation 40 amended

13. Regulation 40 of the regulations is amended by inserting after the words "knowledge areas" the words "appropriate to the category of aircraft intended to be included in the licence as".

Regulation 41 amended

14. Regulation 41 of the regulations is amended in—

(a) subregulation (1), by deleting the words "and flight instruction at an approved Aviation Training Organization" and substituting the words "and dual flight instruction appropriate to the class or type rating sought at an Approved Training Organization";

(b) subregulation (3), by inserting after the word "aircraft" the words "within the appropriate category"; and

(c) subregulation (4), by deleting the words "in subregulation (2)," and substituting the words "in Part E of Schedule 4,".

Regulation 43 amended

15. Regulation 43 of the regulations is amended by deleting subregulation (4) and substituting the following:

" (4) An applicant for a Commercial Pilot Licence may credit to—

(a) the 250 hours required by subregulation (1);

(b) 190 hours required by subregulation (2)*(a)*; or

(c) 150 hours required by subregulation (2)*(b)*,

a maximum of 10 hours for training in a flight simulation training device representing the applicable category, class and type of aircraft appropriate to the rating sought.".

Regulation 47 amended

16. Regulation 47 of the regulations is amended in—

(a) subregulation (1)—

(i) in paragraph *(a)*, by inserting after the words "Private Pilot Licence" the words "in an aircraft within the appropriate aircraft category";

(ii) in paragraph *(b)*, by deleting the words "in any aircraft" and substituting the words "in an aircraft within the appropriate aircraft category";

(iii) in paragraph *(c)*, by deleting the words "in any aircraft" and substituting the words "in an aircraft within the appropriate aircraft category";

(iv) in paragraph *(d)*, by deleting the words "commercial air transportation operations in aircraft" and substituting the words "an aircraft within the appropriate aircraft category"; and

(b) subregulation (2)*(c)*, by deleting the words "act as pilot in command of" and substituting the word "pilot".

17. Regulation 49 of the regulations is amended in— Regulation 49 amended

(a) subregulation (1), by inserting after the words "A person wishing to apply for an Airline Transport Pilot Licence" the words "appropriate to an aeroplane, helicopter and powered-lift category"; and

(b) subregulation (1)*(g)*, by inserting after the words "knowledge test in the applicable knowledge areas" the words "appropriate to the category of aircraft intended to be included on the licence".

18. The Regulations are amended by deleting regulation 50 and substituting the following: Regulation 50 amended

"Airline transport pilot aeronautical knowledge requirements Schedule 5 Part A

50. (1) An applicant for an Airline Transport Pilot Licence shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of an Airline Transport Pilot Licence and appropriate to the category of aircraft intended to be included in the licence in the aeronautical knowledge areas set out in Part A of Schedule 5.

(2) In addition to the requirements of subregulation (1), the applicant for an Airline Transport Pilot Licence applicable to the aeroplane or powered-lift category shall have met the knowledge requirements for the instrument rating required by regulation 60(1)*(b)* (iii).".

19. The Regulations are amended in regulation 51 by deleting subregulation (2) and substituting the following: Regulation 51 amended

" (2) An applicant for an Airline Transport Pilot Licence under regulation 49, shall provide the Authority with evidence that he has met the skills requirements of Part B of Schedule 5 in respect of his ability to perform as pilot in command of an aircraft of the appropriate category required to be operated with a co-pilot.

Regulation 52 amended

20. The Regulations are amended by deleting regulation 52 and substituting the following:

"Airline transport pilot aeronautical experience for airplane category rating

52. (1) An applicant for an Airline Transport Pilot Licence with an aeroplane category, shall have no less experience than the specified hours of total time as a pilot of aeroplanes that shall include no less than the hours specified for the relevant category in Part C of Schedule 5.

(2) Notwithstanding subregulation (1), where an applicant has logged flight time as a pilot of aircraft in other categories, the Director General shall determine whether such experience is acceptable and recommend the Authority reduce the flight time requirement in accordance with Part C of Schedule 5 as applicable to the category and class rating.

(3) The Director General may recommend that the Authority allow credit of up to 100 hours as part of the total flight time of 1500 hours, for experience as a pilot under instruction in a flight simulation training device which has been approved by the Authority and of which not more than 25 hours shall have been acquired as a flight procedure trainer or a basic instrument flight trainer.".

Regulation 53 amended

21. Regulation 53 of the regulations is amended in subregulation (3) by—

(a) deleting the words "synthetic flight trainer" and substituting the words "flight simulation training device"; and

(b) inserting after the words "total flight time of 1000 hours" the words "as helicopter pilot".

Regulation 57 amended

22. The Regulations are amended in regulation 57, by deleting subregulation (1) and substituting the following:

" (1) The holder of an Airline Transport Pilot Licence (hereinafter referred to as "Airline Transport Pilot") may, subject to the continued validity of the licence including medical fitness requirements—

(a) exercise all the privileges of a Private Pilot Licence and Commercial Pilot Licence of an aircraft within the appropriate aircraft category and in the case of a licence for the aeroplane and powered-lift categories, of the instrument rating; and

(b) act as pilot in command, in commercial air transportation, of an aircraft within the appropriate category and certified for operation with more than one pilot.".

23. The Regulations are amended by inserting after regulation 57 the following: Regulation 57 amended

"Requirements for Glider Pilot Licence

Requirements for Glider Pilot Licence

57A. The requirements for the issue of a Glider Pilot Licence are set out in Schedule 6A.

Requirements for Free Balloon Pilot Licence

Requirements for Free Balloon Pilot Licence

57B. The requirements for the issue of a Free Balloon Pilot Licence are set out in Schedule 6B.".

24. Regulation 58 of the regulations is amended by— Regulation 58 amended

(a) deleting subregulation (1) and substituting the following:

" (1) A pilot shall hold an appropriate Type Rating for the aircraft when acting as a pilot in command of—

(a) an aircraft certified for operation with at least two pilots;

(b) a helicopter or a powered-lift aircraft certified for single-pilot operation except where such helicopter or powered-lift aircraft has been issued a class rating under regulation 22; and

(c) any other aircraft where it is considered necessary by the Authority."; and

(b) inserting after subregulation (1), the following:

" (1A) The Director General may recommend the Authority establish a common Type Rating for aircraft with similar characteristics in terms of operating procedures, systems and handling.".

25. Regulation 60 of the regulations is amended— Regulation 60 amended

(a) in subregulation (1)—

(i) by inserting after the word "Rating" the words "for aeroplanes, helicopters, powered-lift and airship categories";

(ii) by deleting paragraph *(b)*(iv) and substituting the following:

" (iv) the ability to perform the procedures and manoeuvres through the required skill test set out in Part B of Schedule 6 with a degree of competency appropriate to the privileges granted to the holder of an Instrument Rating and to—

(A) recognize and manage threats and errors;

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

(C) complete all manoeuvres with smoothness and accuracy;

(D) exercise good judgment and airmanship;

(E) apply aeronautical knowledge; and

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

(iii) by deleting paragraph *(b)*(vi) and substituting the following:

" (vi) the experience set out in Part E of Schedule 6;";

(iv) by deleting paragraph *(b)*(vii) and substituting the following:

" (vii) gained not less than 10 hours of the instrument flight time while receiving dual instrument flight instruction in the aircraft category being sought, from an authorized flight instructor who 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 Instrument Flight Rules flight plan;

(B) pre-flight inspection, use of checklists, taxiing and pre-take-off checks;

(C) procedures and manoeuvres for Instrument Flight Rules operation under normal, abnormal and emergency conditions covering at least transition to instrument flight on take-off, standard instrument departures and arrivals, *en route* Instrument Flight Rules procedures, holding procedures, instrument approaches to specified minima, missed approach procedures and landings from instrument approaches; and

(D) in-flight manoeuvres and particular flight characteristics."; and

(v) in paragraph *(d)*, by deleting the words "Part D of Schedule 6" and substituting the words "Part E of Schedule 6"; and

(b) in subregulation (6), by deleting the word "aeroplane" and substituting the words "aircraft of the appropriate category".

Regulation 64A inserted

26. The Regulations are amended by inserting after regulation 64 the following:

"Privileges of a holder of an instrument rating

Privileges of a holder of an instrument rating

64A. (1) The privileges of a holder of an instrument rating with a specific aircraft category shall be to pilot that category of aircraft under Instrument Flight Rules.

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

Regulation 70 amended

27. The Regulations are amended by deleting regulation 70.

Regulation 77 amended

28. Regulation 77 of the regulations is amended by inserting after the words "flight instructor ratings" the words "appropriate to aeroplanes, helicopters, powered-lifts and airships".

Regulation 78 amended

29. The Regulations are amended by deleting regulation 78 and substituting the following:

"Prohibition on instructors in flight training

Prohibition on instructors in flight training

78. (1) A person shall not carry out flight instructions required for the issue of a pilot licence or rating unless he holds a Flight Instructor Rating issued by the Authority in accordance with these Regulations.

(2) A person shall not carry out instructions on a flight simulation training device required for the issue of a pilot licence or rating unless he holds an appropriate licence or has appropriate flight training and flight experience and has received proper authorization from the Authority.".

Regulation 79 amended

30. Regulation 79 of the regulations is amended in subregulation (1)—

(a) by deleting paragraph *(e)* and substituting the following:

" *(e)* hold either a Commercial Pilot Licence or an Airline Transport Pilot Licence with an aircraft category and class rating that is appropriate to the Flight Instructor Rating sought;";

(b) in paragraph *(f)*, by inserting after the words "with evidence of meeting the" the words "aeronautical ground training and knowledge"; and

(c) by deleting paragraph *(h)* and substituting the following:

" *(h)* have demonstrated, in the category and class of aircraft for which flight instructor privileges are sought, the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instructions as appropriate;".

Regulation 80 amended

31. Regulation 80 of the regulations is amended—

(a) in the heading immediately above regulation 80, by inserting after the words "Aeronautical Ground Training" the words "and knowledge";

(b) in subregulation (1)—

(i) in paragraph *(i)*, by inserting after the words "use of training aids" the words "including flight simulation training device as appropriate"; and

(ii) in paragraph *(k)*, by inserting after the words "relevant to flight instruction" the words "including principles of threat and error management".

32. Regulation 99*(e)* of the regulations is amended by deleting the words "hold a Class 1 medical certificate" and substituting the words "hold a Class 2 medical certificate". Regulation 99 amended

33. The Regulations are amended by deleting regulation 102 and substituting the following: Regulation 102 amended

"Flight Engineer Licence skill requirements

102. (1) The applicant for a Flight Engineer Licence shall have demonstrated the ability to—

(a) perform as flight engineer of an aircraft;

(b) perform the duties and procedures prescribed in regulation 101(4) with a degree of competency appropriate to the privileges granted to the holder of a flight engineer licence;

(c) recognize and manage threats and errors;

(d) use aircraft systems within the aircraft's capabilities and limitations;

(e) exercise good judgment and airmanship;

(f) apply aeronautical knowledge;

(g) perform all the duties as part of an integrated crew with the successful outcome assured; and

(h) communicate effectively with the other flight crew members.

(2) The Director General may recommend the Authority approve the use of a flight simulation training device for performing any of the procedures required during the demonstration of skill required by this regulation, where the flight simulation training device is appropriate to the task.".

34. Regulation 112 of the Regulations is amended by— Regulation 112 amended

(a) deleting subregulation (10) and substituting the following:

" (10) A pilot, when acting as co-pilot at a pilot station of an aircraft certified for operation by a single pilot but required by the Authority to be operated with a co-pilot, shall be entitled to be credited with not more than fifty per cent of the co-pilot flight time towards the total flight time required for a higher grade of pilot licence.

(10A) Notwithstanding subregulation (10), where the aircraft is equipped to be operated by a co-pilot and the aircraft is operated in multi-crew operation, the pilot acting as co-pilot may be credited in full with that flight time towards the total flight time required for a higher grade of pilot licence.

(10B) The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certified to be operated with a co-pilot, shall be entitled to be credited in full with that flight time towards the total flight time required for a higher grade of pilot licence.

(10C) The holder of a pilot licence, when acting as pilot in command under supervision, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence."; and

(b) deleting subregulation (18).

Regulation 113 amended

35. Regulation 113 of the regulations is amended—

(a) in the heading immediately above regulation 113, by deleting the words "Limitation on the use of Flight Simulator and Flight Training Device" and substituting the words "Limitation on the use of Flight Simulation Training Device for Acquisition of Experience and Demonstrations of Skill";

(b) in subregulation (1), by deleting the words "the use of any flight training equipment for satisfying any training, testing, or checking requirements of this Part unless that flight training equipment is" and substituting the words "any flight simulation training device for satisfying any training, testing or checking requirements of this Part or for the acquisition of experience unless that flight simulation training device is appropriate to the task and is";

(c) in subregulation (1) *(b)* (iii), by inserting after the word "flight" the word "simulation";

(d) in subregulation (3), by inserting after the words "consider as a flight" the word "simulation"; and

(e) in subregulation (4), by deleting the words "a device other than a flight training simulator or flight" and substituting the words "or accept a device other than a flight simulation".

Regulation 153 amended

36. Regulation 153 of the regulations is amended by deleting subregulations (1) and (2) and substituting the following:

" (1) An airman shall be assessed by a Civil Aviation Medical Examiner for a Class 1 medical certificate to exercise the privileges of—

(a) an Airline Transport Pilot Licence;

(b) a Commercial Pilot Licence; and

(c) an Instrument Rating.

(2) An airman shall be assessed by a Civil Aviation Medical Examiner for a Class 2 medical certificate to exercise the privileges of—

(a) a Student Pilot Licence;

(b) a Private Pilot Licence;

(c) a Flight Engineer Licence;

(d) Glider Pilot Licence; and

(e) Free Balloon Pilot Licence.".

Regulation 154 amended

37. The Regulations are amended by deleting regulation 154 and substituting the following:

"Validity of medical assesment

154. (1) A Medical Assessment issued by the Authority under regulation 152 shall be valid from the date of the medical examination for a period not greater than—

(a) sixty months for a private pilot licence for aeroplane, airship, helicopter and powered-lift;

(b) twelve months for a commercial pilot licence for aeroplane, airship, helicopter and powered-lift;

(c) twelve months for multi-crew pilot licence for aeroplane;

(d) twelve months for airline transport licence for aeroplane, helicopter and powered-lift;

(e) sixty months for glider pilot licence;

(f) sixty months for free balloon pilot licence;

(g) twelve months for flight engineer licence; and

(h) forty-eight months for air traffic controller licence.

(2) Notwithstanding the requirements of subregulation (1), the Director General may recommend the Authority—

(a) reduce the period of validity of a medical certificate when clinically indicated; or

(b) extend the period of validity of a medical certificate for up to forty-five days.

(3) Where the holder of—

(a) an airline transport pilot licence for aeroplane, helicopter or powered-lift; or

(b) a commercial air transport licence for aeroplane, airship, helicopter or powered-lift,

who is engaged in single-crew commercial air transport operations carrying passengers, has passed his fortieth birthday, the period of validity specified in subregulation (1), shall be reduced to six months.

(4) Where a holder of—

(a) an airline transport pilot licence for aeroplane, helicopter or powered-lift;

(b) a commercial air transport licence for aeroplane, airship, helicopter or powered-lift; or

(c) a multi-crew pilot licence engaged in commercial air transport operations,

has passed his sixtieth birthday, the period of validity specified in subregulation (1) shall be reduced to six months.

(5) Where a holder of private pilot licence for aeroplane, airship, helicopter and powered-lift, free balloon pilot licence, glider pilot licence and air traffic controller licence has passed his fortieth birthday, the period of validity specified in subregulation (1) shall be reduced to twenty-four months.

(6) Where a holder of private pilot licence for aeroplane, airship, helicopter and powered-lift, free balloon pilot licence, glider pilot licence and air traffic controller licence has passed his fiftieth birthday, the period of validity specified in subregulation (1) shall be further reduced to twelve months.".

Regulation 189A amended

38. Regulation 189A of the regulations is amended in—

(a) subregulation (1), by deleting the words "An aeroplane or helicopter pilot" and substituting the words "An aeroplane, airship, helicopter and powered-lift pilot";

(b) subregulation (3), by deleting the words "an aeroplane or helicopter pilot" and substituting the words "an aeroplane, airship, helicopter and powered-lift pilot,"; and

(c) subregulation (4), by deleting the words "an aeroplane or helicopter pilot" and substituting the words "an aeroplane, airship, helicopter and powered-lift pilot,".

Schedule A inserted

39. The Regulations are amended by inserting before Schedule 1 the following new Schedule:

"Schedule A

Quantity	Units	
altitude	foot	ft
distance (long)	Nautical mile	NM
elevation	foot	ft
height	foot	ft
airspeed	knot	kt
ground speed	knot	kt
vertical speed	Foot/minute	ft/min
wind speed	knot	kt

".

Schedule 3 amended

40. Schedule 3 of the Regulations is amended by—

(a) deleting Part A and substituting the following:

"PART A

[Regulations 31(2) and 34(1)*(a)*]

An applicant for a Private Pilot Licence shall demonstrate aeronautical knowledge in at least the following subjects appropriate to the privileges of the licence being sought and appropriate to the category of aircraft intended to be included in the licence:

Air law

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

Aircraft general knowledge for aeroplane, helicopter, powered-lift and airship

(b) principles of operation and function of power-plants, systems and instruments;

(c) operating limitations of the relevant category of aircraft and power-plants, relevant operational information from the flight manual or other appropriate documents;

(d) for helicopter and powered-lift, transmission or power-trains, as applicable;

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

Flight performance, planning and loading

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

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

(h) preflight and *en route* flight planning appropriate to private operations under Visual Flight Rules, preparation and filing of air traffic services flight plans, appropriate air traffic services procedures, position reporting procedures, altimeter setting procedures, operation in areas of high-density traffic;

Human performance

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

Meteorology

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

Navigation

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

Operational Procedures

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

(m) altimeter setting procedures;

(n) use of aeronautical documentation such as AIP, NOTAM, aeronautical chart and abbreviations;

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

(p) in the case of helicopter, and where applicable, powered-lift, settling with power, ground resonance, retreating blade stall, dynamic roll-over and other operation hazards, safety procedures associated with flight in Visual Meteorological Conditions;

(q) principles of flight; and

Radiotelephony

(r) communication procedures and phraseology as applied to Visual Flight Rules operations, action to be taken in case of communication failure.";

(b) deleting Part B and substituting the following:

"PART B

[Regulation 33(1)]

Flight instruction

1. Aeroplanes

The applicant shall have received dual instruction in aeroplanes appropriate to the class rating sought, from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

(a) recognize and manage threats and errors;

(b) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;

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

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

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

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

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

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

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

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

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

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

(m) communication procedures and phraseology.

2. Helicopters

The applicant shall have received not less than 20 hours of dual instruction time in helicopters from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

(a) recognize and manage threats and errors;

(b) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;

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

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

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

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

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

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

(i) emergency operations, including simulated helicopter equipment malfunctions; auto-rotative approach;

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

(k) communication procedures and phraseology.

3. Airship

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

(a) recognize and manage threats and errors;

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

(c) ground reference manoeuvres;

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

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

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

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

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

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

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

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

(l) communication procedures and phraseology;

(c) deleting Part C and substituting the following:

"PART C

[Regulation 33(1)]

Flight Test Tolerances:

An applicant shall demonstrate the ability to—

(a) recognize and manage threats and errors;

(b) operate the aircraft within its limitations;

(c) complete all manoeuvres with smoothness and accuracy;

(d) exercise good judgement and airmanship;

(e) apply aeronautical knowledge; and

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

(d) deleting Part D and substituting the following:

"PART D

[Regulation 34(3)]

The aeronautical experience required for the issue of a Private Pilot Licence shall include the following for the category and class of aircraft for each category and class rating sought, as applicable:

1. Specific experience requirements for the issue of the aeroplane category rating.

The applicant shall have completed—

(a) not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as an aeroplane pilot appropriate to the class rating sought. Credit shall be limited to a maximum of 5 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 40 hours or 35 hours, as the case may be;

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

2. Specific experience requirements for the issue of the helicopter category rating.

The applicant shall have completed—

(a) not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a helicopter pilot. Credit shall be limited to a maximum of 5 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 40 hours or 35 hours, as the case may be;

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

3. Specific experience requirements for the issue of the airship category rating.

The applicant shall have completed not less than 25 hours of flight time as an airship pilot, including at least—

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

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

(c) 3 hours of instrument time; and

(d) 5 hours as pilot assuming the duties of the pilot in command under the supervision of the pilot in command.".

Schedule 4 amended

41. Schedule 4 of the Regulations is amended by—

(a) deleting Part A and substituting the following:

"PART A

(Regulation 42)

The applicant shall have demonstrated the ability to perform as pilot in command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres for the issue of a Commercial Pilot Licence as follows:

1. Aeroplane

The applicant shall have received dual instruction in aeroplanes appropriate to the class and type rating sought from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(a) recognize and manage threats and errors;

(b) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;

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

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

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

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

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

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

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

(j) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

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

(l) abnormal and emergency procedures and manoeuvres including simulated aeroplane equipment malfunctions;

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

(n) communication procedures and phraseology.

2. Helicopter

The applicant shall have received dual instruction in helicopters from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(a) recognize and manage threats and errors;

(b) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;

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

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

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

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

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

(h) hovering out of ground effect, operations with external load, if applicable; flight at high altitude;

(i) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

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

(k) abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing;

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

(m) communication procedures and phraseology.

3. Airship

The applicant shall have received dual instruction in airships from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(a) recognize and manage threats and errors;

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

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

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

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

(f) recognition of leaks;

(g) normal take-offs and landings;

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

(i) flight under Instrument Flight Rules;

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

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

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

(m) communication procedures and phraseology.".

(b) deleting Part B and substituting the following:

"PART B

[Regulations 39(1), 42]

Flight test tolerances

An applicant shall demonstrate the ability to—

(a) recognize and manage threats and errors;

(b) operate the aircraft within its limitations;

(c) complete all manoeuvres with smoothness and accuracy;

(d) exercise good judgement and airmanship;

(e) apply aeronautical knowledge; and

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

(c) deleting Part C and substituting the following:

"PART C

(Regulation 40)

The following are the general aeronautical knowledge requirements for a Commercial Pilot Licence appropriate to the aeroplane, helicopter, powered-lift and airship categories:

Air law

(a) rules and regulations relevant to the holder of a Commercial Pilot Licence; rules of the air; appropriate air traffic services practices and procedures;

Aircraft General Knowledge for Aeroplanes, Airships, Helicopters and Powered-Lifts

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

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

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

(e) maintenance procedures for airframes, systems and powerplants of appropriate aircraft;

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

(g) for airships, physical properties and practical application of gases;

Flight performance, planning and loading

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

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

(j) pre-flight and *en route* flight planning appropriate to commercial operations under Visual Flight Rules; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures, altimeter setting procedures;

(k) in the case of airships, helicopters and powered-lifts, effects of external loading on handling;

Human performance

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

Meteorology

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

(n) 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;

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

Navigation

(p) air navigation, including the use of aeronautical charts, instruments and navigation aids, an understanding of the principles and characteristics of appropriate navigation systems, operation of airborne equipment;

(q) in the case of airships—

(i) use, limitation and serviceability of avionics and instruments necessary for control and navigation;

(ii) use, accuracy and reliability of navigation systems used in departure, *en route*, approach and landing phases of flight, identification of radio navigation aids;

(iii) principles and characteristics of self-contained and external referenced navigation systems, operation of airborne equipment;

Operational procedures

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

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

(t) altimeter setting procedures;

(u) appropriate precautionary and emergency procedures;

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

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

(x) in the case of helicopters, and if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in Visual Meteorological Conditions;

Principles of flight

(y) principles of flight;

Radiotelephony

(z) communication procedures and phraseology as applied to Visual Flight Rules operations, action to be taken in case of communication failure.

(d) deleting Part D and substituting the following:

"PART D

[Regulation 41(2)]

Flight Instruction Requirements for Commercial Pilot Licence

1. Aeroplane

The applicant shall have received dual instruction in aeroplanes appropriate to the class and type rating sought from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(a) recognize and manage threats and errors;

(b) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;

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

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

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

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

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

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

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

(j) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

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

(l) abnormal and emergency procedures and manoeuvres including simulated aeroplane equipment malfunctions;

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

(n) communication procedures and phraseology.

2. Helicopter

The applicant shall have received dual instruction in helicopters from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(a) recognize and manage threats and errors;

(b) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;

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

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

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

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

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

(h) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;

(i) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

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

(k) abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing;

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

(m) communication procedures and phraseology.

3. Airships

The applicant shall have received dual instruction in airships from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(a) recognize and manage threats and errors;

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

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

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

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

(f) recognition of leaks;

(g) normal take-offs and landings;

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

(i) flight under Instrument Flight Rules;

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

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

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

(m) communication procedures and phraseology.";

(e) deleting Part E and substituting the following:

"PART E

[Regulation 43(1)]

Experience Requirements for Commercial Pilot Licence

1. Specific experience requirements for the issue of an aeroplane category rating.

The applicant shall have completed not less than 250 hours of flight time, or 190 hours if completed during a course of approved training, as an aeroplane pilot. Credit shall be limited to a maximum of 10 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 250 hours or 190 hours, as the case may be.

The applicant shall have completed in aeroplanes not less than—

(a) 150 hours as pilot in command or, in the case of a course of approved training, 100 hours as pilot in command;

(b) 20 hours of cross-country flight time as pilot in command including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full stop landings at two different aerodromes shall be made;

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

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

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

2. Specific experience requirements for the issue of the helicopter category rating.

The applicant shall have completed not less than 150 hours of flight time, or 100 hours if completed during a course of approved training, as a helicopter pilot. Credit shall be limited to a maximum of 10 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 150 hours or 100 hours, as the case may be.

The applicant shall have completed in helicopters not less than—

(a) 35 hours as pilot in command;

(b) 10 hours of cross-country flight time as pilot in command including across-country flight in the course of which landings at two different points shall be made;

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

(d) 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 pilot in command.

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

3. Specific experience requirements for the issue of the airship category rating.

(a) the applicant shall have completed not less than 200 hours of flight time as a pilot;

(b) the applicant shall have completed not less than—

(i) 50 hours as an airship pilot;

(ii) 30 hours in airships as pilot in command or pilot in command under supervision, to include not less than—

(A) 10 hours of cross-country flight time; and

(B) 10 hours of night flight;

(iii) 40 hours of instrument time, of which 20 hours shall be in flight and 10 hours in flight in airships; and

(iv) 20 hours of flight training in airships in the areas of operation listed in clause 3 of Part D of Schedule 4.".

42. Schedule 5 of the Regulations is amended by— Schedule 5 amended

(a) deleting Part A and substituting the following:

"PART A

[Regulation 50(1)]

The following are the required knowledge areas for an Airline Transport Pilot Licence:

Air law

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

Aircraft general knowledge for aeroplanes, helicopters and powered-lifts

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

(c) 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;

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

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

(f) flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects, practices and procedures in the event of malfunctions of various flight instruments and electronic display units;

(g) maintenance procedures for airframes, systems and powerplants of appropriate aircraft;

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

Flight performance, planning and loading

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

(j) use and practical application of take-off, landing and other performance data, including procedures for cruise control;

(k) pre-flight and *en route* operational flight planning; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;

(l) in the case of helicopters and powered-lifts, effects of external loading on handling;

Human performance

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

Meteorology

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

(o) 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;

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

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

Navigation

(r) air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights;

(s) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft;

(t) use, accuracy and reliability of navigation systems used in departure, *en route,* approach and landing phases of flight, identification of radio navigation aids;

(u) principles and characteristics of self-contained and external-referenced navigation systems; operation of airborne equipment;

Operational procedures

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

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

(x) precautionary and emergency procedures; safety practices;

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

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

(aa) in the case of helicopters, and if applicable, powered-lifts, settling with power; ground resonance, retreating blade stall, dynamic rollover and other operating hazards, safety procedures, associated with flight in VMC;

Principles of flight

(bb) principles of flight;

Radiotelephony

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

(b) deleting Part B and substituting the following:

"PART B

[Regulation 51(2)]

1. The applicant for an Airline Transport Pilot Licence shall have demonstrated—

(a) the ability to perform, as pilot in command of an aircraft of the appropriate category required to be operated with a

co-pilot, the following procedures and manoeuvres:

(i) pre-flight procedures, including the preparation of the operational flight plan and filing of the air traffic services flight plan;

(ii) normal flight procedures and manoeuvres during all phases of flight;

(iii) abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as powerplant, systems and airframe;

(iv) procedures for crew incapacitation and crew co-ordination, including allocation of pilot tasks, crew co-operation and use of checklists; and

(v) in the case of aeroplanes and powered-lifts, procedures and manoeuvres for instrument flight described in regulation 60 (1) *(b)* (vii), including simulated engine failure.

(b) the ability to perform the procedures and manoeuvres described in paragraph 1*(a)* with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot licence and to—

(i) recognize and manage threats and errors;

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

(iii) operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;

(iv) perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight;

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

(vi) communicate effectively with other flight crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew co-ordination, including allocation of pilot tasks, crew co-operation, adherence to standard operating procedures (SOPs) and use of checklists.

2. In the case of aeroplanes, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres specified in paragraph 1*(a)* as pilot in command in a multi-engine aeroplane.";

(c) deleting Part C and substituting the following:

"PART C

(Regulations 52 and 53)

Aeronautical experience requirement for Airline Transport Pilot Licence with an aeroplane category and class rating

1. The applicant for an Airline Transport Pilot Licence with an aeroplane category and class rating shall have no less than 1500 hours of total time as a pilot of aeroplanes that includes no less than—

(a) 500 hours as pilot in command under supervision or 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;

(b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot in command or as pilot in command under supervision;

(c) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and

(d) 100 hours of night flight as pilot in command or as co-pilot.

2. Notwithstanding paragraph 1, a pilot who has performed at least twenty night take-offs and landings to a full stop, may substitute each additional night take-off and landing to a full stop, for 1 hour of night flight time to satisfy the requirements of clause 1*(d)*, but not exceeding 25 hours of night flight time.

3. Notwithstanding paragraph 1*(a)*, an applicant for an Airline Transport Pilot Licence who holds a Commercial Pilot Licence, may credit the following acquired flight times toward the 1500 hours of total time as a pilot required under pargraph 1:

(a) co-pilot time acquired in an aeroplane—

(i) where it is required to have more than one pilot by the aeroplane flight manual or type certificate; or

(ii) engaged in operations under the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004 for which a co-pilot is required;

(b) Flight Engineer time to a maximum of 300 hours—

(i) in an aeroplane required to have a Flight Engineer by the aeroplane flight manual or Type Certificate;

(ii) while engaged in operations under the Civil Aviation [(No. 3) Air Operator Certification and Administration] Regulations, 2004 for which a Flight Engineer is required; and

(iii) while the pilot is participating in a pilot training programme approved by the Authority;

(c) in calculating the Flight Engineer time to be credited under subparagraph *(b)*, every three hours of flight time recorded shall count as one credit hour.

Aeronautical experience requirement for Airline Transport Pilot Licence with a helicopter category and class rating

4. The applicant for an Airline Transport Pilot Licence with a helicopter category and class rating shall have no less than 1000 hours of total time as a pilot of helicopters that includes no less than—

(a) 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 pilot in command or as pilot in command under supervision;

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

(d) 50 hours of night flight as pilot in command or as co-pilot;

(e) 25 hours of night flight as pilot in command or as co-pilot.".

Schedule 6 amended

43. Schedule 6 of the Regulations is amended by—

(a) deleting Part D and substituting the following:

"PART D

[Regulation 60 (1) *(b)* (iii)]

The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an instrument rating in at least the following areas:

Air law

(a) rules and regulations relevant to flight under Instrument Flight Rules, related air traffic services practices and procedures;

Aircraft general knowledge for the aircraft category being sought

(b) use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of aircraft under Instrument Flight Rules and in instrument meteorological conditions; use and limitations of autopilot;

(c) compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects, practices and procedures in the event of malfunctions of various flight instruments;

Flight performance and planning for the aircraft category being sought

(d) pre-flight preparations and checks appropriate to flight under Instrument Flight Rules;

(e) operational flight planning; preparation and filing of air traffic services flight plans under Instrument Flight Rules; altimeter setting procedures;

Human performance for the aircraft category being sought

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

Meteorology for the aircraft category being sought

(g) application of aeronautical meteorology; interpretation and use of reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information; altimetry;

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

(i) in the case of helicopters and powered-lifts, effects of rotor icing;

Navigation for the aircraft category being sought

(j) practical air navigation using radio navigation aids;

(k) use, accuracy and reliability of navigation systems used in departure, *en route*, approach and landing phases of flight; identification of radio navigation aids;

Operational procedures for the aircraft category being sought

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

(m) 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;

(n) precautionary and emergency procedures, safety practices associated with flight under Instrument Flight Rules; obstacle clearance criteria;

Radiotelephony

(o) communication procedures and phraseology as applied to aircraft operations under Instrument Flight Rules, action to be taken in case of communication failure.".

(b) deleting Part E and substituting the following:

"PART E

[Regulations 60 (1)*(b)* (vi) and *(d)*]

The following experience meets the requirements for the Instrument Rating sought:

(a) the applicant shall hold a pilot licence for the aircraft category being sought.

(b) the applicant shall have completed not less than—

(i) 50 hours of cross-country flight time as pilot in command of aircraft in categories acceptable to the Authority, of which not less than 10 hours shall be in the aircraft category being sought; and

(ii) 40 hours of instrument time in aircraft of which not more than 20 hours, or 30 hours where a flight simulator is used, may be instrument ground time;

(c) the ground time under subparagraph *(b)* (ii), shall be under the supervision of an authorized instructor.

44. The Regulations are amended by inserting after Schedule 6 the following: Schedules 6A and 6B inserted

"SCHEDULE 6A

(Regulation 57A)

Glider Pilot Licence

1. Requirements for the issue of the Glider Pilot Licence are as follows:

(a) the applicant shall be not less than 16 years of age;

(b) the applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a glider pilot licence, in at least the following subjects:

Air law

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

Aircraft general knowledge

(ii) principles of operation of glider systems and instruments;

(iii) operating limitations of gliders; relevant operational information from the flight manual or other appropriate document;

Flight performance, planning and loading

(iv) effects of loading and mass distribution on flight characteristics; mass and balance considerations;

(v) use and practical application of launching, landing and other performance data;

(vi) pre-flight and *en route* flight planning appropriate to operations under Visual Flight Rules; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic;

Human performance

(vii) human performance relevant to the glider pilot including principles of threat and error management;

Meteorology

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

Navigation

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

Operational procedures

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

(xi) different launch methods and associated procedures;

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

Principles of flight

(xiii) principles of flight relating to gliders;

(xiv) communication procedures and phraseology as appropriate to Visual Flight Rules operations and on action to be taken in case of communication failure;

(c) the applicant shall have completed not less than six hours of flight time as a pilot of gliders including two hours of solo flight time, during which not less than 20 launches and landings have been performed;

(d) when the applicant has flight time as a pilot of aeroplanes, the Authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of subparagraph *(c)* can be reduced;

(e) the applicant shall have gained, under appropriate supervision, operational experience in gliders in at least the following areas:

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

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

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

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

(v) flight throughout the flight envelope;

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

(vii) normal and crosswind launches, approaches and landings;

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

(ix) emergency procedures.

(f) the applicant shall have demonstrated the ability to perform as pilot in command of a glider, the procedures and manoeuvres described in subparagraph *(d)* with a degree of competency appropriate to the privileges granted to the holder of a glider pilot licence, and to—

(i) recognize and manage threats and errors;

(ii) operate the glider within its limitations;

(iii) complete all manoeuvres with smoothness and accuracy;

(iv) exercise good judgement and airmanship;

(v) apply aeronautical knowledge; and

(vi) maintain control of the glider at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured; and

(g) the applicant shall hold a current Class 2 Medical Assessment.

2. *(a)* The privileges of the holder of Glider Pilot Licence shall be to act as pilot in command of any glider, provided the licence holder has operational experience in the launching method used.

(b) If passengers are to be carried, the holder of the Glider Pilot Licence shall have completed not less than 10 hours of flight time as a pilot of gliders.

SCHEDULE 6B

(Regulation 57B)

Free Balloon Pilot Licence

1. Requirements for the issue of the Free Balloon Pilot Licence are as follows:

(a) the applicant shall be not less than 16 years of age;

(b) the applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a free balloon pilot licence, in at least the following subjects:

Air law

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

Aircraft general knowledge

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

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

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

Flight performance, planning and loading

(iv) effects of loading on flight characteristics; mass calculations;

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

(vii) pre-flight and *en route* flight planning appropriate to operations under Visual Flight Rules; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic;

Human performance

(viii) human performance relevant to the free balloon pilot including principles of threat and error management;

Meteorology

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

Navigation

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

Operational procedures

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

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

Principles of flight

(xiii) principles of flight relating to free balloons;

(xiv) communication procedures and phraseology as appropriate to Visual Flight Rules operations and on action to be taken in case of communication failure;

(c) the applicant shall have completed not less than 16 hours of flight time as a pilot of free balloons including at least eight launches and ascents of which one must be solo.

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

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

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

(iii) collision avoidance precautions;

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

(v) recognition of, and recovery from, rapid descents;

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

(vii) approaches and landings, including ground handling; and

(viii) emergency procedures;

(e) where the privileges of the Free Balloon Pilot Licence are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying;

(f) where passengers are to be carried for remuneration or hire, the holder of the Free Balloon Pilot Licence shall have completed not less than 35 hours of flight time including 20 hours as a pilot of a free balloon;

(g) the applicant shall have demonstrated the ability to perform as pilot in command of a free balloon, the procedures and manoeuvres described in paragraph *(d)* with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence, and to—

(i) recognize and manage threats and errors;

(ii) operate the free balloon within its limitations;

(iii) complete all manoeuvres with smoothness and accuracy;

(iv) exercise good judgement and airmanship;

(v) apply aeronautical knowledge; and

(vi) maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured; and

(h) the applicant shall hold a current Class 2 Medical Assessment.

2. *(a)* The privileges of the holder of a Free Balloon Pilot Licence shall be to act as pilot in command of any free balloon provided that the licence holder has operational experience in hot air or gas balloons as appropriate.

(b) Before exercising the privileges at night, the licence holder shall have complied with the requirements specified in paragraph 1*(e)*.

45. The Regulations are amended by deleting Schedule 9 and substituting the following: Schedule 9 amended

"SCHEDULE 9

(Regulation 100)

Flight Engineer Licence Knowledge Requirements

1. The applicant for a Flight Engineer Licence shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a Flight Engineer Licence, in at least the following areas:

Air law

(a) rules and regulations relevant to the holder of a flight engineer licence; rules and regulations governing the operation of civil aircraft pertinent to the duties of a flight engineer;

Aircraft general knowledge

(b) basic principles of powerplants, gas turbines and 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;

(c) principles of operation, handling procedures and operating limitations of aircraft powerplants, effects of atmospheric conditions on engine performance;

(d) airframes, flight controls, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life, identification of structural damage and defects;

(e) ice and rain protection systems;

(f) pressurization and air-conditioning systems, oxygen systems;

(g) hydraulic and pneumatic systems;

(h) basic electrical theory, electric systems (AC and DC), aircraft wiring systems, bonding and screening;

(i) principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, displays and avionics;

(j) limitations of appropriate aircraft;

(k) fire protection, detection, suppression and extinguishing systems;

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

Flight performance, planning and loading

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

(n) use and practical application of performance data including procedures for cruise control;

Human performance

(o) human performance relevant to the flight engineer including principles of threat and error management;

Operational procedures

(p) 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;

(q) normal, abnormal and emergency procedures;

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

Principles of flight

(s) fundamentals of aerodynamics;

Radiotelephony

(t) communication procedures and phraseology.

2. In addition to paragraph 1, the applicant should have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight engineer licence in at least the following subjects:

(a) fundamentals of navigation; principles and operation of self-contained systems; and

(b) operational aspects of meteorology.".

Made by the Civil Aviation Authority this 6th day of February, 2007.

R. LUTCHMEDIAL
Civil Aviation Authority

Approved by the Minister of Works and Transport this 6th day of February, 2007.

C. IMBERT
Minister of Works and Transport

Laid in the House of Representatives this day of , 2007.

Clerk of the House

Laid in the Senate this day of , 2007.

Clerk of the Senate

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