CIVIL AVIATION DIRECTIVE – 1

PERSONNEL LICENSING

CIVIL AVIATION AUTHORITY OF MALAYSIA

ISSUE 01
REVISION 00 – 1ST APRIL 2021

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Introduction

In exercise of the powers conferred by Section 24O of the Civil Aviation Act 1969 [Act 3], the Chief Executive Officer makes this Civil Aviation Directive 1 – Personnel Licensing ("CAD 1 – PEL"), pursuant to Regulation(s) 31, 32, 35, 37, 53, 55, 56, 57, 59, 61, 63, 69, 149, 150, 151, 189 and 193 of the Malaysian Civil Aviation Regulations (MCAR) 2016.

This CAD contains the Standards, requirements and procedures pertaining to the provisions personnel licensing issued by the CAAM. The Standards and requirements in this CAD are based mainly on the Standards and Recommended Practices (SARPs) contained in the International Civil Aviation Organisation (ICAO) Annex 1 Thirteenth Edition to the Chicago Convention – Personnel Licensing, Amendment 176.

This Civil Aviation Directives 1 – Personnel Licensing ("CAD 1 – PEL") is published by the Chief Executive Officer under Section 24O of the Civil Aviation Act 1969 [Act 3] and come into operation on 1 April 2021.

Non-compliance with this CAD

Any person who contravenes any provision in this CAD commits an offence and shall on conviction be liable to the punishments under Section 24O (2) of the Civil Aviation Act 1969 [*Act 3*] and/or under Malaysia Civil Aviation Regulation 2016.

(Captain Chester Voo Chee Soon)
Chief Executive Officer
Civil Aviation Authority of Malaysia

Civil Aviation Directive components and Editorial practices

This Civil Aviation Directive is made up of the following components and are defined as follows:

Standards: Usually preceded by words such as *"shall"* or *"must"*, are any specification for physical characteristics, configuration, performance, personnel or procedure, where uniform application is necessary for the safety or regularity of air navigation and to which Operators must conform. In the event of impossibility of compliance, notification to the CAAM is compulsory.

Recommended Practices: Usually preceded by the words such as "*should"* or "*may*", are any specification for physical characteristics, configuration, performance, personnel or procedure, where the uniform application is desirable in the interest of safety, regularity or efficiency of air navigation, and to which Operators will endeavour to conform.

Appendices: Material grouped separately for convenience but forms part of the Standards and Recommended Practices stipulated by the CAAM.

Definitions: Terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

Tables and Figures: These add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Notes: Included in the text, where appropriate, Notes give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;

Attachments: Material supplementary to the Standards and Recommended Practices or included as a guide to their application.

It is to be noted that some Standards in this Civil Aviation Directive incorporates, by reference, other specifications having the status of Recommended Practices. In such cases, the text of the Recommended Practice becomes part of the Standard.

The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in CAD 5. Where CAD 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Throughout this Civil Aviation Directive, the use of the male gender should be understood to include male and female persons.

Record of revisions

Revisions to this CAD shall be made by authorised personnel only. After inserting the revision, enter the required data in the revision sheet below. The *'Initials'* has to be signed off by the personnel responsible for the change.

Rev No.	Revision Date	Revision Details	Initials

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1 General

1.1 Description

1.1.1 Citation

1.1.1.1 These Directives are the Civil Aviation Directives 1 – Personnel Licensing (CAD 1 PEL), Issue 01/Revision 00, and comes into operation on 1 April 2021.

1.1.1.2 This CAD 1 – PEL, Issue 01/Revision 00 will remain current until withdrawn or superseded.

1.1.2 Applicability

1.1.2.1 The Personnel Licensing Directives in this CAD 1 are for Flight Crew Members, Approved Training Organisation Aircraft Maintenance Personnel, Maintenance Training Organisation and ATCOs.

1.1.2.2 This CAD prescribes the requirements for issuance, renewal and variation of the licences and ratings as listed in paragraph 1.2 and the associated conditions.

1.1.3 Revocation

1.1.3.1 This CAD, in conjunction with CAD 1006 – DFE read together with CAD 1007 – ELPT, revokes 10FC-16 Flight Crew Licensing Issue 2 Amendment 1 dated 15 July 2019.

1.1.3.2 This CAD also revokes FOD 002/2018 Malaysian Pilot Flying With An Operator Outside Malaysia Using Foreign Licence Issue 1 dated 1st October 2018.

1.1.4 Types of Flight Crew, Aircraft Maintenance Personnel and ATCO Qualifications

1.1.4.1 The licences and/or authorisations issued by the CAAM to licence flight crew, aircraft maintenance personnel and ATCOs fall into four (4) primary groups:

Type	Descriptions
Licence	A document issued by the CAAM that indicates privileges a holder is authorised to exercise and the associated conditions if applicable.
Rating	An authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.
Endorsement	An additional qualification which extends the privileges of an aircraft rating of the licence holder

Validation	An authorisation issued by CAAM, as an alternative to issuing its own licence, by rendering valid a licence issued by any other ICAO Contracting State as the equivalent of its own licence.

1.1.4.2 For types of licence refer to 1.2.

1.1.4.3 A rating can mean any of the following:

a) Aircraft category rating

b) Aircraft class or type rating

c) Operational rating

d) ATCO category rating

1.1.5 References

1.1.5.1 The following references were used either wholly or partly, in the preparation and compilation of this CAD 1.

a) MCAR 2016.

b) ICAO Annex 1.

c) International Civil Aviation Organisation (ICAO).

1) Doc 9379 (Licensing System).

d) EASA Part FCL.

1.2 General rules concerning licences

CAAM issues licences to the following personnel:

a) Flight crew

student pilot — aeroplane and helicopter;

private pilot — aeroplane and helicopter;

commercial pilot — aeroplane and helicopter;

multi-crew pilot — aeroplane;

airline transport pilot — aeroplane and helicopter;

free balloon pilot;

as of 3 November 2022, remote pilot — aeroplane or free balloon.

b) Other personnel

aircraft maintenance;

air traffic controller;

1.2.1 Authority to act as a flight crew member

1.2.1.1 Until 2 November 2022, a person shall not act as a flight crew member of a 9M registered civil aircraft unless a valid licence is held showing compliance with the specifications of this CAD and appropriate to the duties to be performed by that person. The licence shall have been issued by CAAM or by any other Contracting State and rendered valid by CAAM.

1.2.1.2 As of 3 November 2022, a person shall not act as a flight crew member of a 9M registered civil aircraft or as a remote flight crew member of a RPAS unless a valid licence is held showing compliance with the specifications of this CAD and appropriate to the duties to be performed by that person.

1.2.1.3 As of 3 November 2022, the flight crew member licence shall have been issued by CAAM or by any other Contracting State and rendered valid by CAAM.

1.2.1.4 As of 3 November 2022, the remote pilot licence for RPAS shall have been issued by CAAM or by any other Contracting State and rendered valid by CAAM.

1.2.1.5 As of 3 November 2022, remote pilots shall carry their appropriate licence while engaged in international air operations.

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

1.2.2 Method of rendering a licence valid

Note 1.– For pilots, refer to Appendix 10 for Conditions for The Acceptance of Licences Issued by or on Behalf of Contracting States.

Note 2.– For aircraft maintenance personnel, refer to CAD 1802 – Validation of Foreign Aircraft Maintenance Licence.

1.2.2.1 CAAM renders valid a licence issued by another Contracting State as an alternative to the issuance of its own licence. When CAAM limits the authorisation to specific privileges, the authorisation shall specify the privileges of the licence which are to be accepted as its equivalent. The validity of the authorisation shall not extend beyond the period of validity of the licence. The authorisation ceases to be valid if the licence upon which it was issued is revoked or suspended.

1.2.2.2 When an authorisation under 1.2.2.1 is issued for use in commercial air transport operations, the validity of the other Contracting States' licence shall be confirmed before CAAM issues the authorisation, with a validity of 6 months.

1.2.2.3 Rendering a licence valid pursuant to a formal agreement between Contracting States under common licensing regulations

1.2.2.3.1 Notwithstanding the provisions in 1.2.2.1 and 1.2.2.2, CAAM may automatically render valid other Contracting States licences, provided that the States shall have:

a) adopted common licensing regulations that are compliant with this CAD;

b) entered into a formal agreement recognising the automatic validation process;

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

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

1.2.2.3.2 An endorsement shall appear on licences rendered valid under the process of 1.2.2.3.1 indicating that the licence is automatically validated under the agreement described in 1.2.2.3.1 and referencing the ICAO registration number of the agreement. The endorsement shall further include a list of all States that are party to the agreement. 1.2.2.3.2.1 provides a transition period for States that meet the requirements in 1.2.2.3.1 and have issued licences prior to the applicability of this Standard.

1.2.2.3.2.1 Until 31 December 2022, States that meet the requirements in 1.2.2.3.1 and have issued licences prior to 9 November 2017 may use other effective means, carried on board the aircraft or accessible, to indicate that the licences issued by the State are rendered valid in accordance with the agreement in 1.2.2.3.1.

1.2.2.4 The CAAM may render valid a pilot licence issued by a Contracting State for use in private flights.

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

1.2.3 Privileges of the holder of a licence

1.2.3.1 The holder of a licence issued by CAAM shall not exercise the privileges other than those granted by that licence.

1.2.3.2 The provisions for endorsements requirement shall apply before exercising the privileges of the licence on the following flight activities:

The following flight activities shall require an endorsement:

a) Aerobatics flight activity endorsement.

b) Formation flying (aeroplane) flight activity endorsement.

c) Formation aerobatics flight activity endorsement.

d) Spinning flight activity endorsement.

e) Formation flying (helicopter) flight activity endorsement.

1.2.3.3 For aircraft maintenance personnel, refer to CAD 1801 – Aircraft Maintenance Licence.

1.2.4 Medical fitness

1.2.4.1 An applicant for a licence shall, when applicable, hold a Medical Assessment issued in accordance with the provisions of Chapter 6.

1.2.4.2 CAAM shall apply, as part of its State safety program, basic safety management principles to the medical assessment process of licence holders that as a minimum include:

a) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and

b) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

1.2.4.3 CAAM shall implement appropriate aviation-related health promotion for licence holders subject to a Medical Assessment to reduce future medical risks to flight safety.

1.2.4.4 The period of validity of a Medical Assessment shall begin on the day the medical examination is performed. The duration of the period of validity shall be in accordance with the provisions of 1.2.5.2.

1.2.4.4.1 The period of validity of a Medical Assessment may be extended, at the discretion of CAAM, up to 45 days.

1.2.4.5 Until 2 November 2022, except as provided in 1.2.5.2.6, flight crew members or air traffic controllers shall not exercise the privileges of their licence unless they hold a current Medical Assessment appropriate to the licence.

Note.- As of 3 November 2022, except as provided in 1.2.5.2.6, flight crew members, remote flight crew members or air traffic controllers shall not exercise the privileges of their licence unless they hold a current Medical Assessment appropriate to the licence.

1.2.4.6 CAAM shall designate medical examiners, qualified and licenced in the practice of medicine, to conduct medical examinations of fitness of applicants for the issue or renewal of the licences or ratings specified in Chapters 2 and 3, and of the appropriate licences specified in Chapter 4.

1.2.4.6.1 Medical examiners shall have received training in aviation medicine and shall receive refresher training at regular intervals. Before designation,

medical examiners shall demonstrate adequate competency in aviation medicine.

1.2.4.6.2 Medical examiners shall have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

Note.— Examples of practical knowledge and experience are flight experience, simulator experience, on-site observation or any other hands-on experience deemed by the Licensing Authority to meet this requirement.

1.2.4.6.3 The competence of a medical examiner shall be evaluated periodically by the medical assessor.

1.2.4.7 Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner a declaration stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. They shall indicate to the examiner whether a Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

1.2.4.7.1 Any false declaration to a medical examiner made by an applicant for a licence or rating shall be reported to CAAM for such action as may be considered appropriate.

1.2.4.8 Having completed the medical examination of the applicant in accordance with Chapter 6, the medical examiner shall coordinate the results of the examination and submit a signed report, or equivalent, to CAAM, in accordance with its requirements, detailing the results of the examination and evaluating the findings with regard to medical fitness.

1.2.4.8.1 If the medical report is submitted to CAAM in electronic format, adequate identification of the examiner shall be established.

1.2.4.8.2 If the medical examination is carried out by two or more medical examiners, CAAM shall appoint one of these to be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

1.2.4.9 The Medical Assessor shall evaluate reports submitted to CAAM by medical examiners.

1.2.4.9.1 The medical examiner shall submit sufficient information to enable CAAM to undertake Medical Assessment audits.

1.2.4.9.2 If the medical Standards prescribed in Chapter 6 for a particular licence are not met, the appropriate Medical Assessment shall not be issued or renewed unless the following conditions are fulfilled:

a) accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardise flight safety;

b) relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and

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

1.2.4.10 Medical confidentiality shall be respected at all times.

1.2.4.10.1 All medical reports and records shall be securely held with accessibility restricted to authorised personnel.

1.2.4.10.2 When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to relevant officials of CAAM.

1.2.4.11 Where an instructor or examiner is unable to meet the medical requirements for the licence, rating or certificate held, he shall exercise the privileges (except for training for zero flight time type rating ("ZFTT") or take off and landings) of their licence, rating or certificate in an FSTD providing they are assessed as medically fit.

1.2.5 Validity of licences

1.2.5.1 Licence holders shall maintain competency and meet the requirements for recent experience established by CAAM to exercise the privileges granted by that licence, or by related ratings.

1.2.5.1.1 To maintain competency, an air traffic controller shall undergo recurrent training as per CAD 1201 paragraph 3.1.2 item c), and proficiency examination as per CAD 1201 paragraph 2.9.5.1.

1.2.5.1.2 The recent experience requirements of air traffic controllers are established in CAD 1211 Appendix H and CAD 1201 paragraph 2.2.

1.2.5.1.3 Until 2 November 2022, the maintenance of competency of flight crew members, engaged in commercial air transport operations, shall be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with CAD 6 and CAD 1011.

Note.— As of 3 November 2022, the maintenance of competency of flight crew or remote flight crew members, engaged in commercial air transport operations, shall be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with CAD 6 and CAD 11.

1.2.5.1.4 Until 2 November 2022, maintenance of competency shall be satisfactorily recorded in the operator's records, flight crew member's personal log book, and licence.

Note.— As of 3 November 2022, maintenance of competency shall be satisfactorily recorded in the operator's records, the remote flight crew member's personal log book and licence.

1.2.5.1.5 Until 2 November 2022, flight crew members shall, to the extent deemed feasible, demonstrate their continuing competency in FSTDs approved by CAAM.

Note.— As of 3 November 2022, flight crew and remote flight crew members shall, to the extent deemed feasible, demonstrate their continuing competency in FSTDs approved by CAAM.

1.2.5.2 Except as provided in 1.2.5.2.1, 1.2.5.2.2, 1.2.5.2.3, 1.2.5.2.4, 1.2.5.2.5 and 1.2.5.2.6, a Medical Assessment issued in accordance with 1.2.4.7 and 1.2.4.8 shall be valid from the date of the medical examination for a period not greater than:

a) 24 months for the student pilot licence – aeroplane and helicopter;

b) 60 months for the private pilot licence — aeroplane and helicopter;

c) 12 months for the commercial pilot licence — aeroplane and helicopter;

d) 12 months for the multi-crew pilot licence — aeroplane;

e) 12 months for the airline transport pilot licence — aeroplane and helicopter;

f) 60 months for the free balloon pilot licence;

g) 48 months for the air traffic controller licence; and

h) as of 3 November 2022, 48 months for the remote pilot licence — aeroplane or free balloon.

Note 1.— The periods of validity listed above may be extended by up to 45 days in accordance with 1.2.4.4.1.

Note 2.— When calculated in accordance with 1.2.5.2 and its sub-paragraphs, the period of validity shall be to the end of the month which the medical assessment is done.

1.2.5.2.1 The period of validity of a Medical Assessment may be reduced when clinically indicated.

1.2.5.2.2 When the holders of airline transport pilot licences — aeroplane, helicopter, and commercial pilot licences — aeroplane and helicopter, who are engaged in single-crew commercial air transport operations carrying passengers, have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to six months.

1.2.5.2.3 When the holders of airline transport pilot licences — aeroplane and helicopter, commercial pilot licences — aeroplane and helicopter and multi-crew pilot licences — aeroplane, who are engaged in commercial air transport operations, have passed their 60th birthday, the period of validity specified in 1.2.5.2 shall be reduced to six months.

1.2.5.2.4 Until 2 November 2022, when the holders of private pilot licences — aeroplane and helicopter, free balloon pilot licences and air traffic controller licences have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to 24 months.

Note.— As of 3 November 2022, when the holders of private pilot licences — aeroplane and helicopter, remote pilot licences — aeroplane or free balloon, free balloon pilot licences and air traffic controller licences have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to 24 months.

1.2.5.2.5 Until 2 November 2022, when the holders of private pilot licences — aeroplane and helicopter, free balloon pilot licences and air traffic controller licences have passed their 50th birthday, the period of validity specified in 1.2.5.2 shall be further reduced to 12 months.

Note 1. - As of 3 November 2022, when the holders of private pilot licences — aeroplane and helicopter, remote pilot licences — aeroplane or free balloon, free balloon pilot licences and air traffic controller licences have passed their 50th birthday, the period of validity specified in 1.2.5.2 shall be further reduced to 12 months.

Note 2.— The periods of validity listed above are based on the age of the applicant at the time of undergoing the medical examination.

1.2.5.2.6 The prescribed medical examination/re-examination of a licence holder may be deferred. Refer to CAD 1004 – MED paragraph 2.18 on details for deferment.

1.2.5.2.7 Once issued, a flight crew licence and the ratings contained on that licence are perpetually valid.

1.2.5.2.8 However, the licence holder is required to undergo periodic proficiency checks along with the required medical for the level of licence held to maintain all the privileges a qualification provides.

1.2.5.2.9 In the event a flight crew rating and/or certificate attached to the licence has lapsed, the renewal of the privileges of the rating or certificate for a further specified period is contingent upon the fulfilment of the specified requirements as follows:

1.2.5.2.9.1 For rating and certificates that have expired for 5 years and below, an individual will be required to pass the following:

a) MCTOM below 5700 kgs for aeroplanes or 3175 kgs for helicopters:

1) Less than 1 year – a proficiency check.

2) Between 1 to 5 years.

i) Aircraft type tech for the class rating being sought.

ii) 1 training flight in an aircraft or CAAM approved FSTD for the class rating being sought that consist of 3 take-offs and landings; and

iii) a proficiency check.

b) MCTOM above 5700 kgs for aeroplanes or 3175 kgs for helicopters:

1) Less than a year – a proficiency check.

2) Between 1 to 5 years.

i) Aircraft type tech for the type rating being sought;

ii) 2 training flights in an aircraft or CAAM approved FFS for the type rating being sought that consist of 3 take-offs and landings; and

iii) A proficiency check.

1.2.5.2.9.2 For rating and certificates that have expired for more than 5 years but less than 10 years, individual will be required to pass the following:

a) MCTOM below 5700 kgs for aeroplanes or 3175 kgs for helicopters:

1) Theoretical knowledge examination as follows:

i) Air Law 1.

ii) Air Law 2.

iii) Operational Procedures.

iv) Human Performance and Limitations (if not sat and passed before); and

v) Aircraft type tech

2) 2 training flights in an aircraft or CAAM approved FFS for the type rating being sought that consist of 3 take-offs and landings; and

3) a skill test.

b) MCTOM above 5700 kgs for aeroplanes or 3175 kgs for helicopters:

1) Theoretical knowledge examination as follows:

i) Air Law 1.

ii) Air Law 2.

iii) Operational Procedures.

iv) Human Performance and Limitations (if not sat and passed before, and

v) Aircraft type tech.

2) shortened type rating course approved by the CAAM.

3) a skill test.

1.2.5.2.9.3 For rating and certificates that have expired for more than 10 years and above, individual will be required to pass the following:

a) All theoretical knowledge examinations for appropriate level.

b) Full type rating course approved by the CAAM; and

c) A skill test.

1.2.5.2.9.4 For rating and certificates that have expired for 5 years and below, but the licence holder is active flying and current by exercising the privileges of a foreign licence:

a) If the applicant is exercising his privileges on the same type rating being sought, he will be required to meet the requirements in 1.2.5.2.9.5 (c), and complete:

1) type rating proficiency check.

b) If the applicant is exercising his privileges on a different type rating that is being sought, he will be required to meet the requirements in 1.2.5.2.9.5 (c), and complete:

1) aircraft type tech for the type rating being sought; and

2) type rating proficiency check.

Note.- List of documents required to be submitted for this application can be referred to CAGM 1001 - FCL.

1.2.5.2.9.5 For rating and certificates that have expired for more than 5 years, but the licence holder is active flying and current by exercising the privileges of a foreign licence:

a) If the applicant is exercising his privileges on the same type rating being sought, he will be required to meet the requirements in 1.2.5.2.9.5 (c), and complete:

1) Theoretical knowledge examination as follows:

i) Air Law 1.

ii) Air Law 2.

iii) Operational Procedures; and

iv) Human Performance and Limitations (if not sat and passed before).

2) type rating skill test.

b) If the applicant is exercising his privileges on a different type rating that is being sought, he will be required to meet the requirements in 1.2.5.2.9.5 (c), and complete:

1) Theoretical knowledge examination as follows:

i) Air Law 1.

ii) Air Law 2.

iii) Operational Procedures; and

iv) Human Performance and Limitations (if not sat and passed before).

2) aircraft type tech for the type rating being sought; and

3) type rating skill test.

Note.- List of documents required to be submitted for this application can be referred to CAGM 1001 - FCL.

c) “Active flying and current” in the above two paragraphs mean the licence holder:

1) has completed at least 4 CAT operations in the aircraft type sought in the 12 months immediately preceding the date of application.

2) has completed 2 proficiency checks of the aircraft type sought (in an aircraft or FSTD approved by the foreign Civil Aviation Authority) in the 12 months immediately preceding the date of application. The 2 proficiency check shall not occur within a period of 4 months. At least one these proficiency checks shall have been carried out by the foreign Civil Aviation Authority or its authorised representative, while the other may be carried out by the operator; and

3) has operated the flight controls of the aircraft type sought during at least 3 take-offs and landings in the 90 days immediately preceding the date of application, in an aircraft or FSTD approved by the foreign Civil Aviation Authority.

d) If the IR has not been renewed within the preceding 7 years, the holder will be required to pass again the IR theoretical knowledge examination and skill test. Refer 2.7.1.1 for list of IR theoretical knowledge subjects.

e) Renewal of the Medical Certificate of Validity only does not validate the holder to exercise the privileges of the licence. If the Medical Certificate of Validity has expired for more than 5 years, the examinations requirements for initial issue shall apply and the assessment shall be based on the renewal requirements.

1.2.5.3 Refer to CAD 1801 – Aircraft Maintenance Licence (CAAM Part-66) for validity of aircraft maintenance personnel licences.

1.2.6 Decrease in medical fitness

1.2.6.1 Holders of licences provided for in this CAD shall not exercise the privileges of their licences and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

1.2.6.1.1 Guidelines on medical conditions relevant to flight safety are contained in CAD 1004 - MED and ICAO Doc 8984.

1.2.6.1.2 Licence holders shall not exercise the privileges of their licences and related ratings during any period in which their medical fitness has, from any cause, decreased to an extent that would have prevented the issue or renewal of their Medical Assessment.

1.2.7 Use of psychoactive substances

1.2.7.1 Holders of licences provided for in this CAD shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.

1.2.7.2 Holders of licences provided for in this CAD shall not engage in any problematic use of substances.

1.2.7.3 Licence holders who engage in any kind of problematic use of substances are identified and removed from their safety-critical functions. Return to the safety-critical functions may be considered after successful treatment or, in cases where no treatment is necessary, after cessation of the problematic use of substances and upon determination that the person's continued performance of the function is unlikely to jeopardize safety.

1.2.8 Approved training and approved training organisation

1.2.8.1 Approved training shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training.

1.2.8.2 The approval of a training organisation by CAAM shall be dependent upon the applicant demonstrating compliance with the requirements of Appendix 2 to this CAD and the relevant provisions contained in CAD 19.

1.2.8.3 Approved training for flight crew and air traffic controllers shall be conducted within an approved training organisation.

Note.— The approved training considered in 1.2.8.3 relates primarily to approved training for the issuance of a CAD 1 licence or rating. It is not intended to include approved training for the maintenance of competence or for an operational qualification after the initial issuance of a licence or rating, as may be required for air traffic controllers or for flight crew, such as the approved training under CAD 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, 9.3, or Part III — Helicopter Operations, Section II, 7.3.

1.2.8.4 Until 2 November 2022, competency-based approved training for aircraft maintenance personnel shall be conducted within an approved training organisation.

Note 1.– As of 3 November 2022, competency-based approved training for aircraft and RPAS maintenance personnel shall be conducted within an approved training organisation.

Note 2.— A comprehensive training scheme for the aircraft maintenance personnel licence, including the various levels of competency, is contained in CAD 1801 – Aircraft Maintenance Licence (CAAM Part 66).

1.2.8.5 As of 3 November 2022, competency-based approved training for remote flight crew shall be conducted within an approved training organisation.

1.2.8.6 Competency-based approved training for flight operations officer/flight dispatcher personnel shall be conducted within an approved training organisation.

Note 1. — Procedures supporting the development of competency-based training and assessment for aeroplane flight crew, air traffic controllers, aircraft maintenance personnel, remote flight crew and flight operations officers/flight dispatchers, including ICAO competency frameworks, are contained in the Procedures for Air Navigation Services – Training (Doc 9868, PANS-TRG).

Note 2. — Additional guidance can be found in CAGM 1011 – ATO.

1.2.9 Language proficiency

1.2.9.1 Until 2 November 2022, aeroplane and helicopter pilots and air traffic controllers shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1. The proficiency shall be endorsed on the licence and shall indicate the language, the proficiency level and the validity date.

Note.- As of 3 November 2022, aeroplane and helicopter pilots; aeroplane or free balloon remote pilots; air traffic controllers shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1. The proficiency shall be endorsed on the licence and shall indicate the language, the proficiency level and the validity date.

1.2.9.2 Free balloon pilots shall have the ability to speak and understand the language used for radiotelephony communications.

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

Note:- As of 3 November 2022, the language proficiency of aeroplane and helicopter pilots; aeroplane or free balloon remote pilots; air traffic controllers who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level.

1.2.9.4 Until 2 November 2022, the language proficiency of aeroplane and helicopter pilots required to use the radiotelephone aboard an aircraft and air traffic controllers who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level, as follows:

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

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

1.2.9.5 As of 3 November 2022, the language proficiency of aeroplane and helicopter pilots; aeroplane or free balloon remote pilots required to use the radiotelephone aboard an aircraft and air traffic controllers who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level, as follows:

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

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

1.2.9.6 The demonstration of English language proficiency shall be done through a method of assessment established by an organisation approved by CAAM.

Note.- Refer to CAD 1007 – ELPT for further requirements on ELPT.

1.3 Definitions

Accredited medical conclusion means the conclusion reached by one or more medical experts acceptable to the CAAM for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

Adapted competency model means a group of competencies with their associated description and performance criteria adapted from an ICAO competency framework that an organisation uses to develop competency-based training and assessment for a given role.

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 mean a term designating any electronic device — including its electrical part — for use in an aircraft, including radio, automatic flight control and instrument systems.

Aircraft — category means classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.

Aircraft certificated for single-pilot operation means a type of aircraft which CAAM 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.

Aircraft — type of means all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

Airmanship means the consistent use of good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives.

Airship means a power-driven lighter-than-air aircraft***.***

Appropriate airworthiness requirements means the comprehensive and detailed airworthiness codes established, adopted or accepted by CAAM for the class of aircraft, engine or propeller under consideration.

Approved maintenance organisation (Applicable until 4 November 2020) means an organisation approved by CAAM, in accordance with the requirements of CAD 6 Part I Chapter 8— Aeroplane Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by CAAM.

Approved maintenance organisation (Applicable as of 5 November 2020) means an organisation approved by CAAM, in accordance with the requirements of CAD 8, Part II, Chapter 6 — Maintenance Organisation Approval, to perform maintenance of aircraft, engine, propeller or parts thereof and operating under supervision approved by CAAM.

Approved training means training conducted under special curricula and supervision approved by CAAM.

Approved training organisation means an organisation approved by and operating under the supervision of CAAM in accordance with the requirements of this CAD to perform approved training.

ATS surveillance service means a term used to indicate a service provided directly by means of an ATS surveillance system.

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

Balloon means a non-power-driven lighter-than-air aircraft.

Certify as airworthy (to) means to certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

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

Commercial air transport operation means an aircraft operation involving the transport of passengers, cargo or mail for hire or reward.

Competency means a dimension of human performance that is used to reliably predict successful performance on the job. A competency is manifested and observed through behaviours that mobilise the relevant knowledge, skills and attitudes to carry out activities or tasks under specified conditions.

Competency-based training and assessment means training and assessment that are characterised by a performance orientation, emphasis on standards of performance and their measurement, and the development of training to the specified performance standards.

Competency standard means a level of performance that is define as acceptable when assessing whether or not competency has been achieved.

Conditions means anything that may qualify a specific environment in which performance will be demonstrated.

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.

Co-pilot means a licenced 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.

Credit means recognition of alternative means or prior qualifications.

Cross-country means a flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

Detect and avoid means the capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

Dual instruction time (Applicable until 2 November 2022) means flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft.

Dual instruction time (Applicable as of 3 November 2022) means flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft, or from a properly authorised remote pilot using the remote pilot station during a remotely piloted aircraft flight.

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 mitigate the probability of further errors or undesired states.

FAML means a foreign aircraft maintenance licence granted under the law of any Contracting State.

Flight crew member means a licenced crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Note.- As defined in MCAR 2016, flight crew member specifically means in relation to an aircraft, those members of the crew of the aircraft who respectively undertake to act as pilot, flight navigator, flight engineer and flight radiotelephony operator of the aircraft.

Flight plan means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Flight procedures trainer means *see* Flight simulation training device.

Flight simulation training device (FSTD) (Applicable until 2 November 2022) means any one of the following three types of apparatus in which flight conditions are simulated on the ground:

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

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

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.

Flight simulation training device (FSTD) (Applicable as of 3 November 2022). means any one of the following three types of apparatus in which flight conditions are simulated on the ground:

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

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

A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight or the RPAS environment in instrument flight conditions.

Flight simulator means *see* Flight simulation training device.

Flight time — aeroplanes means the total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

Flight time — helicopters means the total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

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

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

Glider flight time means the total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it comes to rest at the end of the flight.

Handover means the act of passing piloting control from one remote pilot station to another.

Helicopter means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

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

ICAO competency framework means a competency framework, developed by ICAO, is a selected group of competencies for a given aviation discipline. Each competency has a associated description and observable behaviours.

Instrument flight time (Applicable until 2 November 2022) means time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

Instrument flight time (Applicable as of 3 November 2022) means time during which a pilot is piloting an aircraft, or a remote pilot is piloting a remotely piloted aircraft, solely by reference to instruments and without external reference points.

Instrument ground time means time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the CAAM.

Instrument time means Instrument flight time or instrument ground time.

Licensing Authority means CAAM is the responsible authority for the licensing of personnel.

Likely means in the context of the medical provisions in Chapter 6, ***likely*** means with a probability of occurring that is unacceptable to the medical assessor.

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

Medical Assessment means the evidence issued by CAAM that the licence holder meets specific requirements of medical fitness.

Medical assessor means a physician, appointed by CAAM, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

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

Monitoring means a cognitive process to compare an actual to an expected state.

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

Night means the time between twenty minutes after sunset and twenty minutes before sunrise, excluding both the times, determined at surface level.

Observable Behaviour (OB) means a single role-related behaviour that can be observed and may or may not be measurable.

Operation Suitability Data (OSD) means the suite of data required to be established by aircraft manufacturers under EASA Part 21 accepted by CAAM as per Notice 8102 (CAAM Part 21 Subpart B) that is considered important for the safe operation of aircraft type.

Performance criteria means statements used to assess whether the required levels of performance have been achieved for a competency. A performance criterion consists of an observable behaviour, condition(s) and a competency standard.

Pilot (to) means to manipulate the flight controls of an aircraft during flight time.

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

Pilot-in-command means the pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Pilot-in-command under supervision means 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 CAAM.

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

Pilot Proficiency Check means a pilot proficiency check consists of a Licence Proficiency Check and Operator Proficiency Check. A Certificate of Test (CoT) refers to the Licence Proficiency Check.

Powered-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(s) for lift during horizontal flight.

Problematic use of substances means the use of one or more psychoactive substances by aviation personnel in a way that:

a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or

b) causes or worsens an occupational, social, mental or physical problem or disorder.

Psychoactive substances means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Quality system means documented organisational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.

Rated air traffic controller means an air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

Rating means an authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

Remote co-pilot means a licenced remote pilot serving in any piloting capacity other than as remote pilot-in-command but excluding a remote pilot who is in the remote pilot station for the sole purpose of receiving flight instruction.

Remote flight crew member means a licenced flight crew member charged with duties essential to the operation of a remotely piloted aircraft system during a flight duty period.

Remote pilot means a person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

Remote pilot-in-command means the remote pilot designated by the operator as being in command and charged with the safe conduct of a flight.

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

Remotely piloted aircraft (RPA) means an unmanned aircraft which is piloted from a remote pilot station.

Remotely piloted aircraft system (RPAS) means a remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

Rendering (a licence) valid means the action taken by CAAM, 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.

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

Sign a maintenance release (to) (Applicable until 4 November 2022) means to certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness, by issuing the maintenance release referred to in CAD 6.

Sign a maintenance release (to) (Applicable as of 5 November 2022) means to certify that maintenance work has been completed satisfactorily in accordance with appropriate airworthiness requirements, by issuing the maintenance release referred to in CAD 6. (in the case of a release not issued by an approved maintenance organisation) or CAD 8 (in the case of a release issued by an approved maintenance organisation).

Significant means in the context of the medical provisions in Chapter 6, ***significant*** means to a degree or of a nature that is likely to jeopardise flight safety.

Solo flight time means flight time during which a student pilot is the sole occupant of an aircraft.

Solo flight time — remotely piloted aircraft systems means flight time during which a student remote pilot is controlling the remotely piloted aircraft system, acting solo.

State safety programme (SSP) means an integrated set of regulations and activities aimed at improving safety.

Threat means events or errors that occur beyond the influence of an operational person, increase operational complexity and must be managed to maintain the margin of safety.

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

1.3.1 Abbreviations

ADS-B	=	Automatic dependent surveillance–broadcast
ANSRM	=	Air Navigation Services Regulatory Manual
ANSSD	=	Air Navigation Services Standard Directives
AOC	=	Air Operators Certificate
ATCO	=	Air Traffic Controllers
ATO	=	Approved Training Organisation
ATPL	=	Airline Transport Pilot Licence
ATS	=	Air Traffic Services
BPL	=	Balloon Pilot Licence
CAAM	=	Civil Aviation Authority of Malaysia
CAD	=	Civil Aviation Directive
CAT	=	Commercial Air Transport
CAT II/III	=	Category II or III Approaches
CPL	=	Commercial Pilot Licence
DFE	=	Designated Flight Examiner
DPATO	=	Defined Point After Take-off
DPBL	=	Defined Point Before Landing
ELPT	=	English Language Proficiency Test
FFS	=	Full Flight Simulator
FI	=	Flight Instructor
FNPT	=	Flight Navigation and Procedures Trainer
FSTD	=	Flight Simulation Traning Device
FTD	=	Flight Training Device
ICAO	=	International Civil Aviation Organisation
IFR	=	Instrument Flight Rules
IR	=	Instrument Rating
LDP	=	Landing Decision Point
LNAV	=	Lateral Navigation
LPC	=	Licence Proficiency Check
MAPSC	=	Maximum Approved Passenger Seating Configuration
MCAR	=	Malaysian Civil Aviation Regulations
MCC	=	Multi-crew Cooperation
MCTOM	=	Maximum Certified Take-off Mass
MEP	=	Multi Engine Piston
MP	=	Multi Pilot
MPH	=	Multi Pilot Helicopter
MPL	=	Multi-crew Pilot Licence
OPC	=	Operator Proficiency Check
OSD	=	Operational Suitability Data

PF	=	Pilot Flying
PIC	=	Pilot-in-command
PM	=	Pilot Monitoring
PPC	=	Pilot Proficiency Check
PPL	=	Private Pilot Licence
QMP	=	Qualified Military Pilot
RMAF	=	Royal Malaysian Air Force
RNP	=	Required Navigation Performance
RPAS	=	Remotely Piloted Aircraft System
SEP	=	Single Engine Piston
SET	=	Single Engine Turbine
SP	=	Single Pilot
SPIC	=	Student Pilot-in-Command
SPL	=	Student Pilot Licence
TDP	=	Take-off Decision Point
TEM	=	Threat Error Management
UPRT	=	Upset Prevention Recovery Technique
VFR	=	Visual Flight Rules
VNAV	=	Vertical Navigation

1.4 CAAM Licensing Framework

1.4.1 Civil Aviation Directives on personnel licensing

1.4.1.1 CAD 1 consolidates and replaces the existing legislation for personnel licences specified in FOD-FCL for Flight Crew and the applicable regulations for Aircraft Maintenance Personnel and ATCOs.

1.4.1.2 Under this framework, approved training for flight crew, aircraft maintenance personnel and air traffic controllers shall be conducted within an Approved Training Organisation (ATO).

1.4.1.3 The approval of an ATO shall be dependent upon the applicant demonstrating compliance with the requirements of Appendix 2 to CAD 1, CAD 1011- ATO, and the relevant provisions contained in CAD 19 - SM.

1.4.2 Eligible Flight Crew Licence Applicants

1.4.2.1 The following applicants are eligible to apply for Malaysian flight crew licences:

a) Malaysian citizens and permanent residents.

b) Non-Malaysian applicants with no licence.

c) Malaysian military qualified pilot applicants who graduated from a recognised RMAF flying course (See Appendix 5 to this CAD).

d) Foreign qualified pilot applicants (from ICAO contracting state) wishing to fly 9M registered aircraft in Malaysia or overseas.

1.4.2.2 An applicant holding a licence from a contracting state as stated in 1.4.2.1 (d), who wishes to obtain a Malaysian licence shall fulfil the following requirements:

a) pass the theoretical knowledge examination in accordance with 2.3.1.2 (PPL level), 2.4.1.2 (CPL level), 2.6.1.2 (ATPL level).

b) pass type technical on an aircraft of related category, class or rating;

c) meet the skill test requirements in 2.3.1.3 (PPL level), 2.4.1.3 (CPL level), 2.6.1.3 (ATPL level);

d) pass the relevant medical assessment by a CAAM approved ME in accordance with 6.1.1; and

e) pass English Language Proficiency Test at a CAAM approved test centre in accordance with 1.2.9.

f) meet the applicable flying experience (flying hours) in accordance with 2.3.3.1, 2.4.3.1, 2.6.3.1, and Appendix 7 (integrated course).

1.4.2.3 Applicants who possess less than 500 flying hours, shall complete an abridged course. The details of this course can be referred to in CAGM 1001 – FCL.

1.4.3 Eligible ATCO Licence Applicants

1.4.3.1 The following applicants are eligible to apply for Malaysian ATCO licences:

a) Malaysian citizen and permanent residents

b) Overseas applicants with no licence.

c) Malaysian military qualified ATCO applicants who graduated from a recognised RMAF ATCO course.

1.4.4 An Applicant for a Flight Crew and ATCO Licence shall:

a) be competent in Aviation English Language to at least level 4.

b) be qualified to hold the licence, that is:

1) passed all the theory and practical training requirements, and
2) have the required aeronautical experience.
3) passed, in the case of flight crew, a flight test for the licence and associated aircraft category rating, and in the case of ATCO, a test for the licence and associated controlling rating.
4) hold a current medical applicable to the level of licence sought.
5) pass an aviation background check.
6) submit all the required documentation providing evidence they are qualified.
7) pay the application fee for the licence.

1.4.5 An Applicant for an Aircraft Maintenance Personnel licence shall comply with all requirements in CAD 1801.

1.4.6 Applications for a flight crew and ATCO licences shall be made by completing and submitting by electronic or other means the required documentation:

a) submitting the relevant application form(s) available from the CAAM website.

b) a Flight or ATC Examiner must complete and submit test reports indicating a pass along with the examination result advice and any previous fail test reports to CAAM.

c) applications must be made on the relevant form to ensure all the required information is provided and to assist the CAAM to process the application.

d) For PPL, CPL, MPL, ATPL and ATCO licences, the flight or controlling test report is entered on the respective application form.

1.4.7 Pilot logbook entries

1.4.7.1 Each pilot shall enter the following information for each flight or lesson logged:

a) General

1) Date.

2) Total time of flight.

3) Place, or points of departure and arrival, and number of landings.

b) Type of pilot experience or training.

1) Pilot in command or solo.

2) Second in command.

3) Flight instruction received from an authorised flight instructor.

4) Instrument flight instruction from an authorised flight instructor.

5) Pilot ground trainer instruction.

c) Conditions of flight

1) Day or night

2) Actual instrument.

3) Simulated instrument conditions.

1.4.7.2 Logging of pilot time

1.4.7.2.1 Solo flight time. A pilot may log as solo flight time only that flight time when he is the sole occupant of the aircraft.

1.4.7.2.2 Pilot-in-command flight time:

a) A private or commercial pilot may log pilot-in-command time for only that flight time during which that pilot is the sole manipulator of the controls of an aircraft for which the pilot is rated, or, when the pilot is the sole occupant of the aircraft, or, when acting as pilot in command of an aircraft on which more than one pilot is required under the type certification of the aircraft, or the regulations under which the flight is conducted.

b) An airline transport pilot may log as pilot-in-command time all of the flight time during which he acts as pilot-in-command.

c) A flight instructor/examiner may log as pilot-in-command time all flight time during which he occupies the pilot's seat and acts as a flight instructor.

d) A co-pilot acting as pilot-in-command under supervision on an aircraft on which more than one pilot is required under the type certification of the aircraft or as required by operational requirements provided that:

1) such pilot-in-command under supervision time is countersigned by the pilot-in-command; and

2) all the duties and functions of PIC on that flight were carried out in such a way that the intervention of the PIC in the interest of safety was not required.

e) The applicant for the holder of a pilot licence may log as PIC time all solo flight time, flight time as student pilot-in-command (SPIC) and flight time under supervision provided that such student pilot-in-command time and flight time under supervision are countersigned by the instructor;

1.4.7.2.3 Co-pilot flight time. A pilot may log as co-pilot time all flight time during which he acts as co-pilot of an aircraft on which more than one pilot is required under the type certification of the aircraft, or the regulations under which the flight is conducted.

1.4.7.2.4 Instrument flight time. A pilot may log as instrument flight time only that time during which he operates the aircraft solely by reference to instruments, under actual or simulated instrument flight conditions. An instrument flight instructor may log as instrument time that time during which he acts as instrument flight instructor in actual instrument weather conditions.

1.4.7.2.5 Instruction time. All time logged as flight instruction, instrument flight instruction, pilot ground trainer instruction, or ground instruction time must be certified by the appropriate rated and certified instructor from whom it was received or the Chief Flying Instructor or equivalent. Certification may be entered in the candidate's log book as an individual or monthly entry for instruction time credited for a licence or aircraft rating, or in organisational documentation in all other cases.

1.4.7.2.6 Only crew at the flight controls shall log the flight hours. Thus, the safety Co-pilot, Observer and Supernumerary Crew when occupying the jump seat shall not log the flight hours.

1.4.7.2.7 If the holder of a licence carries out a number of flights upon the same day returning on each occasion to the same place of departure and the interval between successive flights does not exceed 30 minutes, such series of flights may be recorded as a single entry.

1.4.7.2.8 Cruise relief co-pilot flight time. A cruise relief co-pilot may log all flight time as co-pilot when occupying either pilot's seat.

1.4.7.3 Presentation of logbook

a) A pilot must present his updated logbook during all licencing related matters and upon request by the CAAM as required by Regulation 69 of the MCAR 2016.

b) A student pilot must have his logbook available within the ATO premise for all solo cross-country flights, as evidence of the required instructor clearances.

c) When any correction or alteration to the logbook entry is required, the pilot shall:

1) cross-out the previous entry with a single line, initial the cross-out and enter the new data.

2) ensure the crossed-out entry is legible.

Note.— The use of correction liquid, tape or pen is prohibited.

1.4.7.4 Falsification of logbooks, licences or applications

a) No person shall make or cause to be made:

1) Any fraudulent or intentionally false statement on any application for a licence, rating or duplicate thereof, issued under this CAD.

2) Any fraudulent or intentionally false entry in any logbook, record or report that is required to be kept, made, or used, to show compliance with any requirement of the issuance, or exercise of the privileges, of any licence or rating under this CAD.

3) Any reproduction, for fraudulent purposes, of any licence or rating under this CAD; and

4) Any alteration of any licence or rating under this CAD.

5) Any false declaration to a medical examiner in respect to a licence or rating.

b) The commission by any person of an act prohibited under this paragraph is a basis for suspending or revoking any licence or rating held by that person.

1.4.8 Appeals process

1.4.8.1 A licence holder or applicant is entitled to appeal against any decision, action or ruling made by the CAAM in respect to a licensing issue.

1.4.8.2 A licence holder or applicant has all legal rights and remedies available to him under Malaysian law to pursue an appeal, which may, or may not, result in a re-assessment of the decision, action or ruling.

1.4.8.3 It is essential that the initial appeal from the licence holder or applicant is made in writing to the CAAM ten working days after the date on which such order or decision is communicated to that person.

1.4.8.4 The appeal should include the specific decision, action or ruling involved with copies of any supporting documentation.

1.4.9 Obligation to present and carry documents

1.4.9.1 A valid licence which consist of a valid medical certificate, a valid certificate of test, a valid instrument rating (if applicable) and a valid English Language Proficiency Test (“ELPT”) certificate shall always be carried by the pilot when exercising the privileges of the licence.

1.4.9.1.1 A validation (rendering valid some privileges of a foreign licence) issued by CAAM along with the corresponding foreign licence and medical; shall always be carried by the pilot while exercising privileges of the validation on a Malaysian registered aircraft.

1.4.9.2 The pilot shall also carry a personal identification document containing his photo.

1.4.9.3 A pilot or a student pilot shall without undue delay present his flight time record for inspection upon request by CAAM authorised representative (person).

1.4.9.4 A student pilot shall carry on all solo cross-country flights evidence of the authorisation required by 2.2.2 of this CAD.

1.4.9.5 A foreign licence holder attending an ATO course in Malaysia shall be exempted from 1.4.9.1.1 above provided he meets all the following requirements:

a) his licence is valid and contains all the requirements necessary for the issue of licence such as medical certificate; and

b) all training flights shall be with an instructor or examiner approved by the CAAM.

1.4.9.6 An aircraft maintenance licence holder shall keep it within the immediate area where he normally exercises the certification privileges and shall present it for inspection upon request by CAAM, together with any documents that permits the certificate privileges to be exercised.

1.4.10 Revocation, suspension and limitation of licences, ratings and certificates

1.4.10.1 Licences, ratings and certificates issued in accordance with this CAD may be limited, suspended or revoked by CAAM when the licence holder does not comply with the requirement of this CAD, CAD 1004 - MED or the applicable operational requirements, in accordance with the conditions and procedures issued by CAAM.

1.4.10.2 When the licence holder has his licence and/or certificate suspended or revoked, he shall within 24 hours return the licence and/or certificate to CAAM.

1.4.11 Theoretical knowledge validity period

1.4.11.1 An applicant has successfully completed the required theoretical knowledge examination for the appropriate pilot licence or rating when he has passed all the required examination papers within a period of 12 months counted from the end of the calendar month when the applicant first attempted an examination.

1.4.11.2 The successful completion of the theoretical knowledge examinations will be valid:

a) for the issue of a PPL or a BPL, for a period of 2 years;

b) for the issue of a CPL or IR, for a period of 3 years;

c) the periods in paragraph 1.4.11.2 (a) and (b) shall be counted from the day when the pilot has passed the last theoretical knowledge examination paper.

1.4.11.3 The completion of the ATPL theoretical knowledge examinations will remain valid for the issuance of an ATPL for a period of 7 years from the last validity date of:

a) an IR entered in the licence; or

b) in the case of helicopters, a helicopter's type rating entered in a licence.

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2 Licences and Ratings for Pilots

2.1 General rules concerning pilot licences and ratings

2.1.1 General licensing specifications

2.1.1.1 A person shall not act either as pilot-in-command or as co-pilot of an aircraft in any of the following categories unless that person is the holder of a pilot licence issued in accordance with the provisions of this chapter:

a) aeroplane

b) free balloon

c) helicopter.

2.1.1.2 The category of aircraft shall be endorsed as a category rating on the licence.

2.1.1.2.1 When the holder of a pilot licence seeks a licence for an additional category of aircraft, CAAM shall endorse the original licence with the new category rating, subject to the conditions of 2.1.2.

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

2.1.1.3.1 An applicant for any pilot licence or rating shall demonstrate, in a manner determined by CAAM, such requirements for knowledge and skill as are specified for that licence or rating.

2.1.2 Category ratings

2.1.2.1 The category ratings are for categories of aircraft listed in 2.1.1.1.

2.1.2.2 Any additional category rating endorsed on a pilot licence shall indicate the level of licensing privileges at which the category rating is granted. (E.g. P1 or P2)

2.1.2.3 The holder of a pilot licence seeking additional category ratings shall meet the requirements of this CAD appropriate to the privileges for which the category rating is sought.

2.1.3 Class and type ratings

2.1.3.1 Class ratings for appropriate aeroplanes are categorisations of single-pilot aeroplanes below MCTOM 5700 kgs not requiring a type rating. These ratings comprise of:

a) single-engine, land;

b) single-engine, sea;

c) multi-engine, land;

d) multi-engine, sea.

2.1.3.2 Type ratings are established for:

a) aircraft certificated for operations with a minimum crew of at least two pilots;

b) aircraft that do not meet the class rating categorisation in 2.1.3.1; and

c) any aircraft whenever considered necessary by CAAM.

Note.— Refer to Appendix 9 for the full list of type ratings and licence endorsements.

2.1.3.3 When an applicant demonstrates skill and knowledge for the initial issue of a pilot licence, the category and the ratings appropriate to the class or type of aircraft used in the demonstration shall be entered on the licence. The licence must be endorsed within 6 months after the completion of the skill test.

2.1.3.4 Variant

a) In order to extend his privileges to another variant of aircraft within one class or type rating, the pilot shall undertake differences or familiarisation training. In the case of variants within a type rating, the differences or familiarisation training shall include the relevant elements defined in the operational suitability data established in accordance with the applicable airworthiness code.

b) If the variant has not been flown within a period of 2 years following the differences training, further differences training or a proficiency check on that variant shall be required to maintain the privileges, except for types or variants within the single-engine piston class rating.

c) The differences training shall be entered in the pilot's logbook or equivalent record and signed by the instructor as appropriate.

Note 1.— Differences training requires the acquisition of additional knowledge and training on an appropriate training device or the aircraft.

Note 2.— Familiarisation training requires the acquisition of additional knowledge.

2.1.4 Circumstances in which class and type ratings are required

2.1.4.1 A pilot licence holder shall not act either as pilot-in-command or as co-pilot of an aeroplane or a helicopter unless the holder has received authorisation as follows:

a) the appropriate class rating specified in 2.1.3.1; or

b) a type rating when required in accordance with the provisions of 2.1.3.2.

2.1.4.1.1 When a type rating is issued limiting the privileges to act as co-pilot, or limiting the privileges to act as pilot-in-command only during the cruise phase of the flight, such limitation shall be endorsed on the rating.

2.1.4.2 For the purpose of training, testing, or specific special purpose non-revenue, non-passenger carrying flights, special authorisation may be provided in writing to the licence holder by CAAM in place of issuing the class or type rating in accordance with 2.1.4.1. This authorisation shall be limited in validity to the time needed to complete the specific flight.

2.1.4.3 Except in the case of the SPL and BPL, holders of a pilot licence shall not act in any capacity as pilots of an aircraft unless they have a valid and appropriate class or type rating, except when undergoing skill tests, or proficiency checks for renewal of class or type ratings, or receiving flight instruction.

2.1.4.4 Notwithstanding Paragraph 2.1.4.3 above, in the case of flights related to the introduction or modification of aircraft types, pilots may hold a special certificate issued by the CAAM, authorising them to perform the flights. This authorisation shall have its validity limited to the specific flights.

2.1.4.5 Without prejudice to paragraphs 2.1.4.3 and 2.1.4.4 above, in the case of flights related to the introduction or modification of aircraft types conducted by design or production organisations within the scope of their privileges, as well as instruction flights for the issue of a flight test rating, when the requirements of 2.1.4 may not be complied with, pilots may hold a flight test rating provided the relevant requirements are met.

2.1.5 Requirements for the issue of class and type ratings

2.1.5.1 Class rating

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

2.1.5.2 Type rating as required by 2.1.3.2 a)

The applicant shall have:

a) gained, under appropriate supervision, experience in the applicable type of aircraft and/or flight simulator in the following:

   1) normal flight procedures and manoeuvres during all phases of flight;

   2) abnormal and emergency procedures and manoeuvres in the event of failures and malfunctions of equipment, such as engine, systems and airframe;

   3) where applicable, instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure;

4) for the issue of an aeroplane category type rating, upset prevention and recovery training; and

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

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

Note2.- Guidance on upset prevention and recovery training is contained in the Manual on Aeroplane Upset Prevention and Recovery Training (Doc 10011).

b) demonstrated the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the duties of a pilot-in-command or a co-pilot as applicable; and

c) demonstrated, at the airline transport pilot licence level, an extent of knowledge determined by CAAM on the basis of the requirements specified in 2.6.1.2.

2.1.5.3 Type rating as required by 2.1.3.2 b) and c)
The applicant shall have demonstrated the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the licensing requirements and piloting functions of the applicant.

2.1.5.4 Training course. An applicant for a class or type rating shall complete a training course at an ATO. The type rating training course shall include the mandatory training elements for the relevant type as defined in the operational suitability data established in accordance with applicable airworthiness code.

2.1.5.5 Theoretical knowledge examination. The applicant for a class or type rating shall pass a theoretical knowledge examination organised by the ATO to demonstrate the level of theoretical knowledge required for the safe operation of the applicable aircraft class or type.

a) For multi-pilot aircraft, the theoretical knowledge examination shall be written and comprise at least 100 multiple-choice questions distributed appropriately across the main subjects of the syllabus.

b) For single-pilot multi-engine aircraft, the theoretical knowledge examination shall be written and the number of multiple-choice questions shall depend on the complexity of the aircraft.

c) For single-engine aircraft, the theoretical knowledge examination shall be written and the number of multiple-choice questions shall depend on the complexity of the aircraft.

d) For single-pilot aeroplanes that are classified as high-performance aeroplanes, the examination shall be written and comprise at least 100 multiple-choice questions distributed appropriately across the main subjects of the syllabus.

2.1.5.6 Skill test

a) An applicant for a class or type rating shall pass a skill test in accordance with Appendix 4 to this CAD to demonstrate the skill required for the safe operation of the applicable class or type of aircraft.

b) The applicant shall pass the skill test within a period of 6 months after commencement of the class or type rating training course and within a period of 6 months preceding the application for the issue of the class or type rating.

c) Before a skill test for the issue of a licence or rating is taken, the applicant shall have passed the required theoretical knowledge examination. In any case, the theoretical knowledge instruction shall always have been completed before the tests are taken.

d) Except for the issue of an ATPL, the applicant for a skill test shall be recommended for the test by the organisation/person responsible for the training, once the training is completed. The training records shall be available to the DFE.

2.1.5.7 An applicant who already holds a type rating for an aircraft type, with the privilege for either single-pilot or multi-pilot operations, shall be considered to have already fulfilled the theoretical requirements when applying to add the privilege for the other form of operation on the same aircraft type.

2.1.5.8 Notwithstanding the paragraphs above, pilots holding a flight test rating who were involved in development, certification or production flight tests for an aircraft type, and have completed either 50 hours of total flight time or 10 hours of flight time as PIC on test flights in that type, shall be entitled to apply for the issue of the relevant type rating, provided that they comply with the experience requirements and the prerequisites for the issue of that type rating for the relevant aircraft category.

2.1.5.9 The holder of a pilot licence must not exercise the privileges of a class/type rating contained in the licence unless the licence also bears a valid LPC, or satisfy the experience requirement in Appendix 12 5(b)(1)(ii) appropriate to the functions the holder is to perform on a flight.

2.1.5.10 The period for which the LPC, or experience requirement, shall be valid to the end of the month which it is done, 12 calendar months later. The renewal requirement of each class/type rating can be found in Appendix 12.

2.1.5.11 Specific requirements for the aeroplane and helicopter categories can be found in Appendix 12.

2.1.6 Use of a FSTD for acquisition of experience and demonstration of skill

2.1.6.1 The use of a FSTD for acquiring the experience or performing any manoeuvre required during the demonstration of skill for the issue of a licence or rating shall be approved by CAAM, which shall ensure that the FSTD used is appropriate to the task.

2.1.7 Circumstances in which an instrument rating is required

2.1.7.1 A pilot licence holder shall not act either as pilot-in-command or as co-pilot of an aircraft under IFR unless such holder has received proper authorisation from CAAM. Proper authorisation shall comprise an instrument rating appropriate to the aircraft category.

2.1.7.2 CAD 1 does not differentiate with respect to grade of Instrument Rating i.e. there are no command or co-pilot grades issued.

2.1.7.3 The Instrument Rating will only differ between holders on the basis of the endorsements they hold on their respective ratings.

2.1.7.4 The category of aircraft flight crew can operate using their Instrument Rating shall be identified by way of an endorsement on the rating.

2.1.7.5 Refer to Appendix 7 and 8 to this CAD for the relevant requirements on IR Skill Test and Cross-crediting of the IR part of a class or type rating proficiency check.

Note.— The instrument rating is included in the airline transport pilot licence — aeroplane category, multi-crew pilot licence, and commercial pilot licence. The provisions of 2.1.7 do not preclude the issue of a licence having the instrument rating as an integral part thereof.

2.1.8 Circumstances in which authorisation to conduct instruction is required

2.1.8.1 A pilot licence holder shall not carry out flight instruction required for the issue of a pilot licence or rating, unless such holder has received proper authorisation from CAAM. Proper authorisation shall comprise:

a) a flight instructor rating on the holder's licence; or

b) the authority to act as an agent of an approved organisation authorised by CAAM to carry out flight instruction; or

c) a specific authorisation granted by CAAM.

2.1.8.2 A person shall not carry out instruction on a FSTD required for the issue of a pilot licence or rating unless such person holds or has held an appropriate licence or has appropriate flight training and flight experience and has received proper authorisation from CAAM.

2.1.8.3 The CAAM may issue a specific certificate granting privileges for flight instruction when compliance with the requirements established in this CAD is not possible in the case of the introduction of:

a) new aircraft in Malaysia or in an operator's fleet; or

b) new training courses in this CAD.

Such a certificate shall be limited to the training flights necessary for the introduction of the new type of aircraft or the new training course and its validity shall not, in any case, exceed 1 year.

2.1.8.4 Holders of a certificate issued in accordance with paragraph 2.1.8.3 (a) above who wish to apply for the issue of an instructor certificate shall comply with the prerequisites and renewal requirements established for that category of instructor.

Note.- Refer to 2.8.3 for flight instructor privileges.

2.1.8.5 Instruction outside the territory of Malaysia.

a) Notwithstanding paragraph 2.1.8.3 above, in the case of flight instruction provided in an ATO located outside the territory of the Malaysia, the CAAM may issue an instructor certificate to an applicant holding a pilot licence issued by other Contracting State in accordance with ICAO Annex 1 to the Chicago Convention, provided that the applicant:

1) holds at least an equivalent licence, rating, or certificate to the one for which they are authorised to instruct and, in any case, at least a CPL.

2) complies with the requirements established in this CAD for the issue of the relevant instructor certificate; and

3) demonstrates to the CAAM an adequate level of knowledge of Malaysian aviation safety rules to be able to exercise instructional privileges in accordance with this CAD.

b) The certificate shall be limited to providing flight instruction:

1) in ATOs located outside the territory of Malaysia; and

2) to student pilots who have sufficient knowledge of the language in which flight instruction is given.

2.1.8.6 Any person who have held a military flying experience may apply to obtain an instructor’s certificate.

2.1.8.7 Such person described in 2.1.8.6 may be granted the instructors certificate if he—

a) hold a valid pilot licence issued under regulation 59 of MCAR other than a student pilot licence;

b) was a qualified flying instructor by the military; and

c) passed an instructor flight test conducted by the CAAM.

2.1.9 Crediting of flight time

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

2.1.9.2 The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certificated for operation by a single pilot but required by CAAM to be operated with a co-pilot, shall be entitled to be credited with not more than 50% of the co-pilot flight time towards the total flight time required for a higher grade of pilot licence. The CAAM may authorise that flight time be credited in full towards the total flight time required if the aircraft is equipped to be operated by a co-pilot and the aircraft is operated in a multi-crew operation.

2.1.9.3 The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certificated to be operated with a co-pilot, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

2.1.9.4 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.

2.1.9.5 Flight time to be credited for a licence, rating or certificate shall have been flown in the same category of aircraft for which the licence, rating or certificate is sought.

Note.- Crediting of theoretical knowledge for the issuance of a licence can be found in Appendix 6.

2.1.10 Limitation of privileges of pilots who have attained their 60th birthday and curtailment of privileges of pilots who have attained their 65th birthday

2.1.10.1 A pilot licence holder shall not act as pilot of an aircraft engaged in commercial air transport operations if the licence holders have attained their 60th birthday or, in the case of operations with more than one pilot, their 65th birthday.

2.1.10.2 The holder of a balloon pilot licence who has attained the age of 70 years shall not act as a pilot of a balloon engaged in CAT.

2.2 Student pilot licence

2.2.1 A student pilot shall meet requirements prescribed by CAAM, which would not permit them to constitute a hazard to air navigation.

2.2.1.1 An applicant, whether for initial pilot training (ab initio) or requiring an abridged course shall not be accepted for training in an approved Professional Pilot's Licence course for CPL/MPL/ATPL unless:

a) he has passed the Sijil Pelajaran Malaysia (SPM) or equivalent qualifications with credits in five subjects including English Language, Mathematics and a Science subject in one single type of examination; or

b) he has attained a degree recognised by the Malaysian Qualifications Agency (MQA) with a cumulative grade point average (CGPA) 3.0 or above and he has passed the Sijil Pelajaran Malaysia (SPM) or equivalent qualifications with credits in English Language, Mathematics and a Science subject.

2.2.1.2 Applicants who possess other equivalent educational qualifications shall refer to the MQA to determine whether their qualifications can be accepted for this purpose while applicants with foreign professional licences shall refer to the CAAM.

2.2.2 A student pilot shall not fly solo unless under the supervision of, or with the authority of, an authorised flight instructor.

2.2.2.1 A student pilot shall not fly solo in an aircraft on an international flight unless by special or general arrangement between the Contracting States concerned.

2.2.2.2 Before his first solo flight, a student pilot shall be at least in the case of aeroplanes, helicopters, and balloons, be 17 years of age.

2.2.2.3 A student pilot shall not carry out any flight training until he has attained his Student Pilot Licence.

2.2.3 Medical fitness

A student pilot shall not fly solo unless that student pilot holds a current Class 2 Medical Assessment.

2.3 Private Pilot Licence

2.3.1 General requirements for the issue of the licence appropriate to the aeroplane and helicopter categories

2.3.1.1 Age

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

2.3.1.2 Knowledge

The applicant shall have completed at least 100 hours of instruction, have demonstrated, through an examination, a level of knowledge appropriate to the privileges granted to the holder of a private pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects:

a) Air law

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

b) Aircraft general knowledge for aeroplanes and helicopters

1) principles of operation and functioning of engines, systems and instruments;

2) operating limitations of the relevant category of aircraft and engines; relevant operational information from the flight manual or other appropriate document;

3) for helicopters, transmission (power trains) where applicable;

c) Flight performance, planning and loading

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

2) 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

1) human performance including principles of TEM;

e) Meteorology

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

f) Navigation

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

g) Operational procedures

1) application of TEM to operational performance;

2) altimeter setting procedures;

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

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

5) in the case of helicopters settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

h) Principles of flight

1) principles of flight;

i) Radiotelephony

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

2.3.1.3 Skill test

The applicant shall have demonstrated through the completion of a skill test in accordance with Appendix 4 of this CAD, the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres described in 2.3.3.2 or 2.3.4.2.1 or 2.3.5.2 or 2.3.6.2 with a degree of competency appropriate to the privileges granted to the holder of a private pilot licence, and to:

a) recognise and manage threats and errors;

b) operate the aircraft within its limitations;

c) complete all manoeuvres with smoothness and accuracy;

d) exercise good judgement and airmanship;

e) apply aeronautical knowledge; and

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

2.3.1.4 Medical fitness

The applicant shall hold a current Class 2 Medical Assessment.

Note.— See 2.7.1.3 on the medical fitness requirements for private pilot licence holders seeking an instrument rating.

2.3.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.3.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of a private pilot licence shall be to act, but not for remuneration, as pilot-in-command or co-pilot of aircraft within the appropriate aircraft category engaged in non-revenue flights.

2.3.2.2 Before exercising the privileges at night, the licence holder shall have received dual instruction in aircraft within the appropriate category of aircraft in night flying, including take-off, landing and navigation. His night rating shall only be valid when he has in the last 6 months carry out five take-offs and landings at night.

2.3.2.3 Notwithstanding paragraph 2.3.2.1 above, the holder of instructor or examiner privileges may receive remuneration for the appropriate aircraft category:

a) the provision of flight instruction for PPL;

b) the conduct of skill tests and proficiency checks for this licence;

c) the training, testing and checking for the ratings or certificates attached to this licence.

2.3.3 Specific requirements for the issue of the aeroplane category rating

2.3.3.1 Experience

2.3.3.1.1 The applicant shall have completed not less than 40 hours of flight time during a course of approved training, as a pilot of aeroplanes appropriate to the class rating sought, a maximum of 5 hours of which may have been completed in an approved FSTD.

2.3.3.1.1.1 When the applicant has flight time as a pilot of aircraft in other categories, 10% of the total flight time as PIC on such aircraft up to a maximum of 10 hours shall be credited and, in any case, not include the requirements in 2.3.3.1.2.

2.3.3.1.2 The applicant shall have completed in aeroplanes not less than 10 hours of solo flight time appropriate to the class rating sought, under the supervision of an 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.

2.3.3.2 Flight instruction

The applicant shall have completed at least 25 hours of dual instruction in aeroplanes appropriate to the class rating sought, from an authorised 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) recognise 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.

Note.— The instrument experience specified in 2.3.3.2 i) and the night flying dual instruction in 2.3.2.2 do not entitle the holder of a private pilot licence to pilot aeroplanes under IFR.

2.3.3.2.1 The 25 hours dual instruction shall include:

a) 4 hours instruction in instrument flying;

b) 4 hours instruction in pilot navigation flying; and

c) 2 hours stall and spin awareness and avoidance training.

2.3.3.3 Night rating

2.3.3.3.1 If the privileges of a PPL for aeroplane are to be exercised in VFR conditions at night, applicants shall have completed a training course at an ATO. The course shall comprise:

a) theoretical knowledge instruction;

b) at least 5 hours of flight time in the appropriate aircraft category at night, including at least 3 hours of dual instruction, including at least 1 hour of cross-country navigation with at least one dual cross- country flight of at least 50 km (27 NM) and 5 solo take-offs and 5 solo full-stop landings.

2.3.4 Specific requirements for the issue of the helicopter category rating

2.3.4.1 Experience

2.3.4.1.1 The applicant shall have completed not less than 40 hours of flight time during a course of approved training, as a pilot of helicopters, 5 hours of which may have been completed in a FSTD.

2.3.4.1.1.1 When the applicant has flight time as a pilot of aircraft in other categories, 10% of the total flight time as PIC on such aircraft up to a maximum of 6 hours shall be credited and, in any case, not include the requirements in 2.3.3.1.2.

2.3.4.1.2 The applicant shall have completed in helicopters not less than 10 hours of solo flight time under the supervision of an authorised flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 185 km (100 NM) in the course of which landings at two different points shall be made.

2.3.4.2 Flight instruction

2.3.4.2.1 The applicant shall have received not less than 25 hours of dual instruction time in helicopters from an authorised 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) recognise 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; autorotative approach;

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

k) communication procedures and phraseology.

2.3.4.2.1.1 The applicant shall have received dual instrument flight instruction from an authorised flight instructor. The instructor should ensure that the applicant has operational experience in flight by reference solely to instruments, including the completion of a level 180° turn, in a suitably instrumented helicopter.

Note.— The instrument experience specified in 2.3.4.2.1.1 and the night flying dual instruction in 2.3.2.2 do not entitle the holder of a private pilot licence to pilot helicopters under IFR.

2.3.4.3 Night rating

2.3.4.3.1 If the privileges of a PPL for helicopters are to be exercised in VFR conditions at night, the applicant shall have:

a) completed at least 100 hours of flight time as pilot in helicopters after the issue of the licence, including at least 60 hours as PIC on helicopters and 20 hours of cross- country flight;

b) completed a training course at an ATO. The course shall be completed within a period of 6 months and comprise:

1) 5 hours of theoretical knowledge instruction;

2) 10 hours of helicopter dual instrument instruction time; and

3) 5 hours of flight time at night, including at least 3 hours of dual instruction, including at least 1 hour of cross-country navigation and 5 solo night circuits. Each circuit shall include a take-off and a landing.

2.3.4.3.2 An applicant who holds or has held an IR in an aeroplane shall be credited with 5 hours towards the requirement in paragraph 2.3.4.3.1(b)(2) above.

2.3.5 Specific requirements for the issue of the powered-lift category rating
RESERVED

2.3.6 Specific requirements for the issue of the airship category rating
RESERVED

2.4 Commercial pilot licence

2.4.1 General requirements for the issue of the licence appropriate to the aeroplane and helicopter categories

2.4.1.1 Age

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

2.4.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge, through an examination, appropriate to the privileges granted to the holder of a commercial pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects:

a) Air law 1 and 2

1) rules and regulations relevant to the holder of a commercial pilot licence; rules of the air; appropriate air traffic services practices and procedures;

b) Aircraft general knowledge for aeroplanes and helicopters

1) principles of operation and functioning of engines, systems and instruments;

2) operating limitations of the relevant category of aircraft and engines; relevant operational information from the flight manual or other appropriate document;

3) use and serviceability checks of equipment and systems of appropriate aircraft;

4) maintenance procedures for airframes, systems and engines of appropriate aircraft;

5) for helicopters, transmission (power trains) where applicable;

c) Flight performance, planning and loading

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

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

3) pre-flight and en-route flight planning appropriate to commercial operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;

4) in the case of helicopters, effects of external loading on handling;

d) Human performance

1) human performance including principles of TEM;

e) Meteorology

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

2) 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;

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

f) Navigation

1) General Navigation - air navigation, including the use of aeronautical charts, instruments.

2) Radio Navigation - Use of navigation aids; an understanding of the principles and characteristics of appropriate navigation systems; operation of airborne equipment;

g) Operational procedures

1) application of TEM to operational performance;

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

3) altimeter setting procedures;

4) appropriate precautionary and emergency procedures;

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

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

7) in the case of helicopters settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

h) Principles of flight

1) principles of flight;

i) Radiotelephony

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

2.4.1.2.1 The applicant shall have completed:

a) 350 hours of instruction; or

b) 250 hours of instruction if the applicant holds a PPL.

2.4.1.3 Skill test

The applicant shall have demonstrated through the completion of a skill test in accordance with Appendix 4 of this CAD, the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres described in 2.4.3.2.1 or 2.4.4.2 with a degree of competency appropriate to the privileges granted to the holder of a commercial pilot licence, and to:

a) recognise and manage threats and errors;

b) operate the aircraft within its limitations;

c) complete all manoeuvres with smoothness and accuracy;

d) exercise good judgement and airmanship;

e) apply aeronautical knowledge; and

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

2.4.1.4 Medical fitness

The applicant shall hold a current Class 1 Medical Assessment.

2.4.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.4.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of a commercial pilot licence shall be:

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

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

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

d) to act as co-pilot of an aircraft within the appropriate aircraft category required to be operated with a co-pilot; and

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

Note.— Certain privileges of the licence are curtailed by 2.1.10 for licence holders when they attain their 60th and 65th birthdays.

2.4.3 Specific requirements for the issue of the aeroplane category rating

2.4.3.1 Experience

2.4.3.1.1 The applicant shall have completed not less than 200 hours of flight time, as a pilot of aeroplanes. CAAM will determine whether experience as a pilot under instruction in a FSTD is acceptable as part of the total flight time of 200 hours. Credit for such experience shall be limited to a maximum of 10 hours.

2.4.3.1.1.1 An applicant who has not met the requirement in 2.2.1.1 shall have a minimum of 500 hours as pilot of aeroplane to be qualified for the issue of CPL(A) licence. This must include meeting the particular requirements specified in 2.4.3.1.1.2 below. Each of these requirements must be met in full but, except where stated otherwise, hours may be credited where appropriate.

2.4.3.1.1.2 The applicant shall have completed in aeroplanes not less than:

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

2.4.3.1.2 When the applicant has flight time as a pilot of aircraft in other categories, CAAM will determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.4.3.1.1 can be reduced accordingly.

2.4.3.1.3 The requirements above are specific to the issuance of a CPL only. For experience requirements pertaining to CPL/IR (Frozen ATPL) integrated course, refer to Appendix 7 of this CAD.

2.4.3.2 Flight instruction

2.4.3.2.1 The applicant shall have received dual instruction in aeroplanes appropriate to the class and/or type rating, sought from an authorised 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) recognise 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.

Note.— The instrument experience specified in 2.4.3.1.1.2 c) and 2.4.3.2.1 j) and the night flying experience and dual instruction specified in 2.4.3.1.1.2 d) and 2.4.2.2 do not entitle the holder of a commercial pilot licence to pilot aeroplanes under IFR.

2.4.3.2.2 The applicant shall have received, in actual flight, upset prevention and recovery training approved by CAAM.

2.4.4 Specific requirements for the issue of the helicopter category rating

2.4.4.1 Experience

2.4.4.1.1 The applicant shall have completed not less than 150 hours of flight time, or 100 hours if completed during a course of approved training, as a pilot of helicopters. CAAM will determine whether experience as a pilot under instruction in a FSTD is acceptable as part of the total flight time of 150 hours. Credit for such experience shall be limited to a maximum of 10 hours.

2.4.4.1.1.1 An applicant who has not met the requirement in 2.2.1.1 shall have a minimum of 500 hours as pilot of aeroplane to be qualified for the issue of CPL(H) licence. This must include meeting the particular requirements specified in 2.4.4.1.1.2 below. Each of these requirements must be met in full but, except where stated otherwise, hours may be credited where appropriate.

2.4.4.1.1.2 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 a cross-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.

2.4.4.1.2 When the applicant has flight time as a pilot of aircraft in other categories, CAAM will determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.4.4.1.1 can be reduced accordingly.

2.4.4.1.3 The requirements above are specific to the issuance of a CPL only. For experience requirements pertaining to CPL/IR (Frozen ATPL), CPL (Frozen ATPL), CPL/IR integrated and CPL integrated course, refer to Appendix 7 of this CAD.

2.4.4.2 Flight instruction

The applicant shall have received dual instruction in helicopters from an authorised 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) recognise 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.

Note.— The instrument experience specified in 2.4.4.1.1.2 c) and 2.4.4.2 i) and the night flying experience and dual instruction specified in 2.4.4.1.1.2 d) and 2.4.2.2 do not entitle the holder of a commercial pilot licence to pilot helicopters under IFR.

2.4.5 Specific requirements for the issue of the power-lift category rating

RESERVED

2.4.6 Specific requirements for the issue of the airship category rating

RESERVED

2.5 Multi-crew pilot licence appropriate to the aeroplane category

2.5.1 General requirements for the issue of the licence

2.5.1.1 Age

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

2.5.1.2 Competencies

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

2.5.1.2.1 Knowledge

2.5.1.2.1.1 The applicant shall have met the requirements specified in 2.6.1.2 for the airline transport pilot licence appropriate to the aeroplane category in an approved training course.

2.5.1.2.1.2 The applicant shall have completed at least 750 hours of instruction for the knowledge level as specified in 2.6.1.2, as well as the hours required for;

a) Theoretical knowledge instruction for the relevant type rating, in accordance to 2.1.5.

b) Upset prevention and recovery technique theoretical knowledge instruction in accordance with CAD 1011 ATO.

2.5.1.2.1.3 Training in the underpinning knowledge requirements shall be fully integrated with the training of the underpinning skill requirements.

2.5.1.2.2 Skill test

2.5.1.2.2.1 The applicant shall have demonstrated through the completion of a skill test, the skills required for fulfilling all the competency units specified in Appendix 4 as pilot flying and pilot not flying, to the level required to perform as a co-pilot of turbine-powered aeroplanes certificated for operation with a minimum crew of at least two pilots under VFR and IFR.

2.5.1.2.2.2 The competency standards to be achieved and that associated performance criteria for the multi-crew pilot licence applicant should be publicly available.

2.5.1.3 Medical fitness

The applicant shall hold a current Class 1 medical assessment.

2.5.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.5.2.1 Subject to compliance with the requirements specified in paragraphs 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of a multi-crew pilot licence shall be:

a) to exercise all the privileges of the holder of a private pilot licence in the aeroplane category provided the requirements of paragraph 2.3.3 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.

2.5.2.2 Before exercising the privileges of the instrument rating in a single-pilot operation in aeroplanes, the licence holder shall have demonstrated an ability to act as pilot-in-command in a single-pilot operation exercised by reference solely to instruments and shall have met the skill requirement specified in 2.7.1.2 appropriate to the aeroplane category.

2.5.2.3 Before exercising the privileges of a commercial pilot licence in a single-pilot operation in aeroplanes, the licence holder shall have:

a) completed in aeroplanes 70 hours, either as pilot-in-command, or made up of not less than 10 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;

b) completed 20 hours of cross-country flight time as pilot-in-command, or made up of not less than 10 hours as pilot-in-command and 10 hours as pilot-in-command under supervision, including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made; and

c) met the requirements for the commercial pilot licence specified in 2.4.1.2, 2.4.1.3, 2.4.3.1.1 (with the exception of 2.4.3.1.1.2 a)) and 2.4.3.2 appropriate to the aeroplane category.

Note 1.— When CAAM grants single-pilot operation privileges to the holder of a multi-crew pilot licence, the privileges shall be documented through an endorsement in the multi-crew pilot licence or through the issuance of a commercial pilot licence in the aeroplane category.

2.5.3 Experience

2.5.3.1 The applicant shall have completed in an approved training course not less than 240 hours as pilot flying and pilot not flying of actual and simulated flight.

2.5.3.2 Flight experience in actual flight shall include at least the experience requirements at 2.3.3.1, upset prevention and recovery training, night flying and flight by reference solely to instruments.

2.5.3.3 In addition to meeting the provisions of 2.5.3.2, the applicant shall have gained, in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, or in a FSTD approved for that purpose, the experience necessary to achieve the advanced level of competency defined in Appendix 3.

2.5.4 Flight instruction

2.5.4.1 The applicant shall have completed a course of approved training covering the experience requirements specified in 2.5.3.

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

2.6 Airline transport pilot licence

2.6.1 General requirements for the issue of the licence appropriate to the aeroplane and helicopter categories

2.6.1.1 Age

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

2.6.1.2 Knowledge

2.6.1.2.1 The applicant shall also have demonstrated a level of knowledge, through an examination, appropriate to the privileges granted to the holder of an airline transport pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects:

a) Air law 1 and 2

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

b) Aircraft general knowledge for aeroplanes and helicopters

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

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

3) 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;

4) use and serviceability checks of equipment and systems of appropriate aircraft;

5) 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;

6) maintenance procedures for airframes, systems and engines of appropriate aircraft;

7) for helicopters, transmission (power trains) where applicable;

c) Flight performance, planning and loading

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

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

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

4) in the case of helicopters, effects of external loading on handling;

d) Human performance

1) human performance including principles of TEM;

e) Meteorology

1) 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;

2) 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;

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

4) in the case of aeroplanes, practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts; jetstreams;

f) Navigation

1) General 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;

2) Radio Navigation

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

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

g) Operational procedures

1) application of TEM to operational performance;

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

3) precautionary and emergency procedures; safety practices;

4) operational procedures for carriage of freight and dangerous goods;

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

6) in the case of helicopters, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

h) Principles of flight

1) principles of flight;

i) Radiotelephony

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

2.6.1.2.2 In addition to the above subjects, the applicant for an airline transport pilot licence applicable to the aeroplane category shall have met the knowledge requirements for the instrument rating at 2.7.1.1.

2.6.1.2.3 The applicant shall have completed:

a) 750 hours of instruction; or

b) 400 hours of instruction if the applicant holds a CPL; or

c) 650 hours of instruction if the applicant holds a PPL.

2.6.1.3 Skill test

2.6.1.3.1 The applicant shall have demonstrated through the completion of a skill test in accordance with Appendix 4 of this CAD, 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 engine, 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, procedures and manoeuvres for instrument flight described in 2.7.4.1 a) to d), including simulated engine failure.

2.6.1.3.1.1 In the case of an aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in 2.6.1.3.1 as pilot-in-command of a multi-engine aeroplane.

2.6.1.3.1.2 The applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in 2.6.1.3 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 crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to SOPs and use of checklists.

2.6.1.3.2 ATPL skill test may be combined with the skill test required for the reactivation of a Malaysian licence in accordance with 1.2.5.2.9.

2.6.1.4 Medical fitness
The applicant shall hold a current Class 1 Medical Assessment.

2.6.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.6.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of an airline transport pilot licence shall be:

a) to exercise all the privileges of the holder of a private and commercial pilot licence in an aircraft within the appropriate aircraft category of the instrument rating; and

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

2.6.2.2 When the holder of an airline transport pilot licence in the aeroplane category has previously held only a multi-crew pilot licence, the privileges of the licence shall be limited to multi-crew operations unless the holder has met the requirements established in 2.5.2.1 a), 2.5.2.2 and 2.5.2.3 as appropriate. Any limitation of privileges shall be endorsed on the licence.

2.6.3 Specific requirements for the issue of the aeroplane category rating

Note.- The requirements below are specific to the issuance of a ATPL only. For experience requirements pertaining to CPL/IR (Frozen ATPL) integrated course, refer to Appendix 7 of this CAD.

2.6.3.1 Experience

2.6.3.1.1 The applicant shall have completed not less than 1 500 hours of flight time as a pilot of aeroplanes. CAAM will determine whether experience as a pilot under instruction in a FSTD is acceptable as part of the total flight time of 1 500 hours. Credit for such experience shall be limited to a maximum of 100

hours, of which not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

2.6.3.1.1.1 The applicant shall have completed in aeroplanes not less than:

a) 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 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

e) 500 hours in multi-crew operation on aeroplanes

2.6.3.1.2 When the applicant has flight time as a pilot of aircraft in other categories, the flight time shall be credited for helicopters, 50% of all the flight time requirements of 2.6.3.1.1.1

2.6.3.1.3 Prerequisites. Applicants for an ATPL shall hold:

a) an MPL; or

b) a CPL and a multi-engine IR for aeroplanes. In this case, the applicant shall also have received instruction in MCC.

2.6.3.2 Flight instruction

The applicant shall have received the dual flight instruction required at 2.4.3.2 for the issue of the commercial pilot licence and at 2.7.4 for the issue of the instrument rating or at 2.5.4 for the issue of the multi-crew pilot licence.

2.6.4 Specific requirements for the issue of the helicopter category rating

Note.- The requirements below are specific to the issuance of a ATPL only. For experience requirements pertaining to CPL/IR (Frozen ATPL) and CPL (Frozen ATPL) integrated course, refer to Appendix 7 of this CAD.

2.6.4.1 Experience

2.6.4.1.1 The applicant shall have completed not less than 1 000 hours of flight time as a pilot of helicopters. CAAM shall determine whether experience as a pilot under instruction in a FSTD is acceptable as part of the total flight time of 1 000 hours. Credit for such experience shall be limited to a maximum of 100 hours, of which not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

2.6.4.1.1.1 The applicant shall have completed in helicopters not less than:

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

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

e) 350 hours in multi-crew operation on helicopters

2.6.4.1.2 When the applicant has flight time as a pilot of aircraft in other categories, the flight time shall be credited:

a) for aeroplanes, 50% of all the flight time requirements of 2.6.4.1.1.1

2.6.4.1.3 Hold a CPL and a multi-pilot helicopter type rating and have received instruction in MCC.

2.6.4.2 Flight instruction

The applicant shall have received the flight instruction required for the issue of the commercial pilot licence (2.4.4.2).

Note.— The instrument time specified in 2.6.4.1.1.1 c) and the night flying time specified in 2.6.4.1.1.1 d) do not entitle the holder of the airline transport pilot licence — helicopter to pilot helicopters under IFR.

2.6.5 Specific requirements for the issue of the powered-lift category rating

RESERVED

2.7 Instrument rating

2.7.1 Requirements for the issue of the rating for aeroplane and helicopter categories

2.7.1.1 Knowledge

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

a) Air law 1 and 2

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

b) Aircraft general knowledge for the aircraft category being sought

1) use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of aircraft under IFR and in instrument meteorological conditions; use and limitations of autopilot;

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

c) Flight performance and planning for the aircraft category being sought

1) pre-flight preparations and checks appropriate to flight under IFR;

2) operational flight planning; preparation and filing of air traffic services flight plans under IFR; altimeter setting procedures;

d) Human performance for the aircraft category being sought

1) human performance relevant to instrument flight in aircraft including principles of TEM;

e) Meteorology for the aircraft category being sought

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

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

3) in the case of helicopters, effects of rotor icing;

f) Navigation for the aircraft category being sought

1) practical air navigation using radio navigation aids;

2) 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 for the aircraft category being sought

1) application of TEM to operational performance;

2) 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;

3) precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria;

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

PANS-OPS, and knowledge of these differences is important for safety reasons.

h) Radiotelephony

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

2.7.1.2 Skill test

2.7.1.2.1 The applicant shall have demonstrated through the completion of a skill test, in an aircraft of the category for which the instrument rating is being sought the ability to perform the procedures and manoeuvres described in 2.7.4.1 with a degree of competency appropriate to the privileges granted to the holder of an instrument rating, and to:

a) recognise and manage threats and errors;

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

c) complete all manoeuvres with smoothness and accuracy;

d) exercise good judgement and airmanship;

e) apply aeronautical knowledge; and

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

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

Note.- A multi-engine centreline thrust aeroplane shall be considered a single-engine aeroplane for the purposes of this paragraph.

2.7.1.3 Medical fitness

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

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

2.7.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6 and 2.1, the privileges of the holder of an instrument rating with a specific aircraft category shall be to pilot that category of aircraft under IFR or at night in weather conditions less than the minimum prescribed for VFR flight.

2.7.2.2 Before exercising the privileges on multi-engined aircraft, the holder of the rating shall have complied with the requirements of 2.7.1.2.1.1.

Note.— Pilots may exercise joint category privileges of the instrument rating on more than one category of aircraft if they have completed the requirements in each category.

2.7.2.3 The privileges of a holder of an IR are to fly aircraft under IFR, including PBN operations, with a minimum decision height of no less than 200 feet (60 m)

2.7.2.4 In the case of a multi-engine IR, these privileges may be extended to decision heights lower than 200 feet (60 m) when the applicant has undergone specific training and has passed section 6 of the skill test check items in Appendix 4 to this CAD in multi-pilot aircraft.

2.7.2.5 Holders of an IR shall exercise their privileges in accordance with the conditions established in Appendix 8 to this CAD.

2.7.2.6 Helicopters only. To exercise privileges as PIC under IFR in multi-pilot helicopters, the holder of an IR shall have at least 70 hours of instrument time of which up to 30 hours may be instrument ground time.

2.7.3 Experience

2.7.3.1 The applicant shall hold a pilot licence for the aircraft category being sought.

2.7.3.2 The applicant shall have completed not less than:

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

b) 40 hours of instrument time in aircraft of which not more than 20 hours, or 30 hours where a flight simulator is used, may be instrument ground time. The ground time shall be under the supervision of an authorised instructor.

2.7.3.3 Helicopters only. Applicants who have completed an CPL/IR (frozen ATPL), CPL (frozen ATPL) or CPL/IR integrated training course shall be exempted from the requirement in paragraph 2.7.3.2.

2.7.4 Flight instruction

2.7.4.1 The applicant shall have gained not less than 10 hours of the instrument flight time required in 2.7.3.2 b) while receiving dual instrument flight instruction in the aircraft category being sought, from an authorised flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an instrument rating:

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:

1) transition to instrument flight on take-off;

2) standard instrument departures and arrivals;

3) en-route IFR procedures;

4) holding procedures;

5) instrument approaches to specified minima;

6) missed approach procedures;

7) landings from instrument approaches;

d) in-flight manoeuvres and particular flight characteristics.

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

2.7.5 Validity and renewal requirement

2.7.5.1 The instrument rating is valid for twelve months.

Note.- When calculated in accordance with 2.7.5.1, the period of validity shall be to the end of the month which the skill test/proficiency check is done.

2.7.5.2 Renewal

a) An IR shall be renewed within the 3 months immediately preceding the expiry date of the rating.

b) An applicant who fails to pass the relevant section of an IR proficiency check before the expiry date of the IR shall not exercise the IR privileges until he has passed the IR section of the proficiency check.

2.8 Flight instructor rating appropriate to aeroplanes and helicopters

2.8.1 Requirements for the issue of the rating

2.8.1.1 Knowledge

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

a) techniques of applied instruction;

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, training philosophies;

f) training program development;

g) lesson planning;

h) classroom instructional techniques;

i) use of training aids, including FSTDs as appropriate;

j) analysis and correction of student errors;

k) human performance relevant to flight instruction including principles of TEM;

l) hazards involved in simulating system failures and malfunctions in the aircraft;

m) Create a climate conducive of learning;

n) Manage time to achieve training objectives;

o) Monitor and review progress;

p) Evaluate training sessions; and

q) Report outcome.

2.8.1.2 Skill

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

2.8.1.3 Experience

The applicant shall have met the experience requirements for the issue of a commercial pilot licence as specified in 2.4.3.1 and 2.4.4.1 for each aircraft category, as appropriate.

2.8.1.3.1 An applicant for or the holder of an instructor certificate with privileges to conduct flight instruction in an aircraft shall:

a) for licence training, hold at least the licence or, in the case of 2.1.8.5, the equivalent licence, for which flight instruction is to be given;

b) for class or type rating training hold the relevant rating for which flight instruction is to be given; and

c) be entitled to act as PIC on the aircraft during such flight instruction.

2.8.1.3.2 Credit towards further ratings and for the purpose of renewal

a) Applicants for further instructor certificates may be credited with the teaching and learning skills already demonstrated for the instructor certificate held.

b) Hours flown as an examiner during skill tests or proficiency checks shall be credited in full towards renewal requirements for all instructor certificates held.

2.8.1.3.3 Credit for extension to further types shall take into account the relevant elements as defined in the operational suitability data.

2.8.1.4 Flight instruction

The applicant shall, under the supervision of a flight instructor accepted by CAAM for that purpose:

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

b) have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

2.8.1.5 Age

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

2.8.1.6 Appendix 11 contains additional requirements for the issuance of a flight instructor rating.

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

2.8.2.1 Subject to compliance with the requirements specified in 1.2.5 and 2.1, the privileges of the holder of a flight instructor rating shall be:

a) to supervise solo flights by student pilots; and

b) to carry out flight instruction for the issue of a private pilot licence, a commercial pilot licence, an instrument rating, and a flight instructor rating provided that the flight instructor:

1) holds at least the licence and rating for which instruction is being given, in the appropriate aircraft category;

2) holds the licence and rating necessary to act as the pilot-in-command of the aircraft on which the instruction is given; and

3) has the flight instructor privileges granted entered on the licence.

2.8.2.2 The applicant, in order to carry out instruction for the multi-crew pilot licence, shall have also met all the instructor qualification requirements.

2.8.3 Flight instructor categories and privileges:

a) FI (1)

b) FI (2)

1) AFI

c) FI (3)

2.8.3.1 The privileges of the holder of a FI (1) rating shall be to conduct flight instructions for:

a) the issue and renewal of a type rating for aeroplanes, and/or helicopters as applicable.

b) the issue and renewal of an IR for aeroplanes, and/or helicopters as applicable.

c) MCC training

d) the issue and renewal of an ATPL for aeroplanes, and/or helicopters.

e) category II and/or III approach endorsements as applicable.

f) in the case of single-pilot aeroplanes:

1) the issue and renewal of type ratings for single-pilot high performance complex aeroplanes when the applicant seeks privileges to operate in single-pilot operations.

g) The issue of an FI (1) certificate provided that the holder has 3 years of experience as FI (1).

h) The initial and recurrent UPRT training for type rating.

2.8.3.1.1 FI for aeroplanes.

The privileges of a FI (1) are restricted to the type of aeroplane in which the training and the assessment of competence was taken. Unless otherwise determined by in the operational suitability data established in accordance with Initial Airworthiness, the privileges of the FI shall be extended to further types when the FI has:

a) completed within the 12 months preceding the application, at least 15 route sectors, including take-offs and landings on the applicable aircraft type, of which 7 sectors may be completed in an FFS;

b) completed the technical training and flight instruction parts of the relevant FI course;

c) passed the relevant sections of the assessment of competence in accordance with Appendix 11 paragraph 3.2 in order to demonstrate to an DFE qualified in accordance with CAD 1006 - DFE his ability to instruct a pilot to the level required for the issue of a type rating, including pre-flight, post-flight and theoretical knowledge instruction.

2.8.3.1.2 FI for helicopters.

The privileges of a FI (1) are restricted to the type of helicopter in which the skill test for the issue of the FI certificate was taken. Unless otherwise determined by in the operational suitability data established in accordance with Initial Airworthiness, the privileges of the FI shall be extended to further types when the FI has:

a) completed the appropriate type technical part of the FI course on the applicable type of helicopter or an FSTD representing that type;

b) conducted at least 2 hours of flight instruction on the applicable type, under the supervision of an adequately qualified FI; and

c) passed the relevant sections of the assessment of competence in accordance with Appendix 11 paragraph 3.2 in order to demonstrate to a DFE qualified in accordance with CAD 1006 - DFE his ability to instruct a pilot to the level required for the issue of a type rating, including pre-flight, post-flight and theoretical knowledge instruction.

Before the privileges of a FI are extended from single-pilot to multi-pilot privileges on the same type of helicopters, the holder shall have at least 100 hours in multi-pilot operations on this type.

Note.- Notwithstanding paragraphs 2.8.3.1.1 and 2.8.3.1.2 above, holders of a FI (1) certificate who have been issued with a type rating in accordance with 2.1.5.8 shall be entitled to have their FI (1) privileges extended to that new type of aircraft.

2.8.3.2 the privileges of the holder of a FI (2) rating shall be to conduct flight instructions for the issue and renewal of:

a) a PPL, BPL and CPL in the appropriate aircraft category and licence.

b) class and type ratings for single-pilot, single-engine aircraft, except for single-pilot high-performance complex aeroplanes provided the applicable requirements of Appendix 11 paragraph 1.2(a) are satisfied.

c) single-pilot multi-engine class or type ratings, except for single-pilot high-performance complex aeroplanes provided the applicable requirements of Appendix 11 paragraph 1.2(a) are satisfied.

d) an IR in the appropriate aircraft category, provided that the holder has:

1) at least 200 hours of flight time under IFR, of which up to 50 hours may be instrument ground time in an FFS, an FTD 2/3 or FNPT II.

2) completed as a student pilot the instrument rating training course and has passed an assessment of competence for the instrument rating instructor certificate; and

3) in addition:

i) for multi-engine aeroplanes:
(1) 500 hours flight time as a pilot on aeroplanes;
(2) 30 hours as PIC on the applicable class or type of aeroplane;

ii) for multi-pilot helicopters, have completed 1 000 hours of flight time as a pilot on helicopters, including:
(1) 350 hours as a pilot on multi-pilot helicopters; or
(2) for applicants already holding a FI (1) certificate for single-pilot multi- engine helicopters, 100 hours as pilot of that type in multi-pilot operations.

e) An AFI and FI (2) certificate provided that the FI has:

1) completed at least:

i) in the case of balloons, at least 50 hours or 50 take-offs of flight instruction on balloons;

ii) in all other cases, 500 hours of flight instruction in the appropriate aircraft category;

f) MPL core flying phase - provided the FI has completed at least 500 hours of flight time as a pilot on aeroplanes, including at least 200 hours of flight instruction.

g) MPL basic phase - provided the FI holds a multi-engine aeroplane IR and the privilege to instruct for an IR, and has completed at least 1500 hours of flight time in multi-crew operation.

h) UPRT training provided the requirements of Appendix 11 paragraph 1.5 are satisfied.

2.8.3.2.1 Assistant Flying Instructor (AFI)

2.8.3.2.1.1 Subject to the appropriate rating or class, an AFI shall have his privileges limited to conducting flight instruction under the supervision of an FI(2) for the same category of aircraft nominated by the ATO for this purpose, in the following cases:

a) for the issue of the PPL and BPL;

b) in all integrated courses at PPL level, in case of aeroplanes and helicopters;

c) for class and type ratings for single-pilot, single-engine aircraft, except for single- pilot high performance complex aeroplanes, class and group extensions in the case; and

d) of balloons.

2.8.3.2.1.2 While conducting training under supervision, in accordance with paragraph 2.8.3.2.1.1, the AFI shall not have the privilege to authorise student pilots to conduct first solo flights and first solo cross-country flights.

2.8.3.2.1.3 An AFI may apply for an FI (2) certificate provided he meets the requirements of an FI (2) in accordance with Appendix 11 paragraph 1.2.

2.8.3.3 The privileges of the holder of a FI (3) rating shall hold all the privileges of FI (1) but is only authorised to conduct them in a CAAM approved FSTD.

2.8.3.3.1 FI (3) shall also hold privileges of conducting flight instruction for the MPL course on the basic, intermediate and advance phases provided that, for the basic phase, he holds or has held an FI (2) certificate.

2.8.4 Refer to Appendix 11 for flight instructor validity and renewal requirements.

2.9 Glider pilot licence

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2.10 Free balloon pilot licence

Note.— The provisions of the free balloon pilot licence apply to free balloons using hot air or gas.

2.10.1 Requirements for the issue of the licence

2.10.1.1 Age

The applicant shall be not less than 16 years of age.

2.10.1.2 Knowledge

2.10.1.2.1 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:

a) Air law

1) 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

1) principles of operation of free balloon systems and instruments;

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

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

c) Flight performance, planning and loading

1) effects of loading on flight characteristics; mass calculations;

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

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

d) Human performance

1) human performance relevant to the free balloon pilot including principles of TEM;

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

e) Navigation

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

f) Operational procedures

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

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

g) Principles of flight

1) principles of flight relating to free balloons.

2.10.1.2.2 The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted to the holder of a free balloon pilot licence, in communication procedures and phraseology as appropriate to VFR operations and on action to be taken in case of communication failure.

2.10.1.3 Experience

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

2.10.1.3.2 The applicant shall have gained, under appropriate supervision, operational experience in free balloons in at least the following areas:

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

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

c) collision avoidance precautions;

d) control of the free balloon by external visual reference;

e) recognition of, and recovery from, rapid descents;

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

g) approaches and landings, including ground handling;

h) emergency procedures.

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

2.10.1.3.4 If passengers are to be carried for remuneration or hire, the licence holder shall have completed not less than 35 hours of flight time including 20 hours as a pilot of a free balloon.

2.10.1.3.5 Recency requirement

2.10.1.3.5.1 Holders of a BPL shall only exercise the privileges of their licence when they have completed in one class of balloons in the last 24 months at least:

a) 6 hours of flight time as PIC, including 10 take-offs and landings; and

b) 1 training flight with an instructor in a balloon within the appropriate class;

c) in addition, in the case of pilots qualified to fly more than one class of balloons, in order to exercise their privileges in the other class, they shall have completed at least 3 hours of flight time on that class within the last 24 months, including 3 take-offs and landings.

2.10.1.3.5.2 Holders of a BPL shall only operate a balloon of the same a group of the balloon in which the training flight is completed or a balloon of a group with a smaller envelope size:

2.10.1.3.5.3 Holders of a BPL who do not comply with the requirements in paragraph 2.10.1.3.5.1 shall, before they resume the exercise of their privileges:

a) pass a proficiency check with an examiner in a balloon within the appropriate class; or

b) perform the additional 3 hours of flight time including 5 take-offs and landings, flying dual or solo under the supervision of an instructor, in order to fulfil the requirements in paragraph 2.10.1.3.5.1.

2.10.1.3.5.4 In the case of paragraph 2.10.1.3.5.3 (a) the holder of the BPL shall only operate a balloon of the same group of the balloon in which the proficiency check is completed or a balloon of a group with a smaller envelope size.

2.10.1.4 Skill test

The applicant shall have demonstrated the ability to perform as pilot-in-command of a free balloon, the procedures and manoeuvres described in 2.10.1.3.2 with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence, and to:

a) recognise and manage threats and errors;

b) operate the free balloon 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 free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

2.10.1.5 Medical fitness

The applicant shall hold a current Class 2 Medical Assessment.

2.10.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.10.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 2.1 and 2.10.1.3.4, 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.

2.10.2.2 Before exercising the privileges at night, the licence holder shall have complied with the requirements specified in 2.10.1.3.3.

Licences and Ratings for Remote Pilot
(The provisions under section of this CAD shall be applicable as of 3 November 2022)

2.11 General rules concerning remote pilot licences and ratings

Note.— The provisions of this section in Chapter 2 are for international IFR operations of RPAS.

2.11.1 General licensing specifications

2.11.1.1 A person shall not act either as remote pilot-in-command or as remote co-pilot of an RPA in any category unless that person is the holder of a remote pilot licence issued in accordance with the provisions of this chapter. The following are RPA categories:

a) aeroplane

b) free balloon.

2.11.1.2 The category of RPA shall be endorsed as a category rating on the remote pilot licence.

2.11.1.3 An applicant shall, before being issued with any remote pilot licence or rating, meet such requirements in respect of age, experience, flight instruction, competencies and medical fitness, as are specified for that remote pilot licence or rating.

2.11.1.4 An applicant for any remote pilot licence or rating shall demonstrate, in a manner determined by CAAM, such requirements for knowledge and skill as are specified for that remote pilot licence or rating.

2.11.2 Category ratings

2.11.2.1 When established, category ratings shall be for categories of RPA listed in 2.11.1.1.

2.11.2.2 The holder of a remote pilot licence seeking additional category ratings to be added to the existing licence shall meet the requirements of this CAD regarding RPAS appropriate to the privileges for which the category rating is sought.

2.11.3 Class and type ratings

2.11.3.1 A class rating shall be established for RPA and associated RPS certificated for single remote pilot operations which have comparable handling, performance and characteristics unless a type rating is considered necessary by CAAM.

2.11.3.2 A type rating shall be established for RPA and associated RPS certificated for operation with a minimum crew of at least two remote pilots or when considered necessary by CAAM.

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

2.11.3.3 When an applicant demonstrates competencies for the initial issue of a remote pilot licence, the category and the ratings appropriate to the class or type of RPA and associated RPS used in the demonstration shall be entered on that remote pilot licence.

2.11.3.4 The levels of performance to be achieved to operate the class or type of RPA for which the ratings are issued will be publicly available.

2.11.4 Circumstances in which class and type ratings are required

2.11.4.1 A remote pilot licence issued by CAAM shall not act either as remote pilot-in-command or as remote co-pilot of an RPA and associated RPS unless the holder has received authorisation as follows:

a) the appropriate class rating specified in 2.11.3.1; or

b) a type rating when required in accordance with 2.11.3.2.

2.11.4.1.1 When a type rating is issued limiting the privileges to act as remote co-pilot, or limiting the privileges to act as remote pilot only during the cruise phase of the flight, such limitation shall be endorsed on the rating.

2.11.4.1.2 When a class rating is issued limiting the privileges to act as remote pilot only during the cruise phase of the flight, such limitation shall be endorsed on the rating.

2.11.4.2 For the purpose of training, testing, or specific special purpose non-revenue flights, special authorisation may be provided in writing to the remote pilot licence holder by CAAM in place of issuing the class or type rating in accordance with 2.11.4.1. This authorisation shall be limited in validity to the time needed to complete the specific flight.

2.11.5 Requirements for the issue of class and type ratings

2.11.5.1 Class rating
The applicant shall have demonstrated the competencies required for the safe operations of an RPA of the class for which the rating is sought.

2.11.5.2 Type rating as required by 2.11.3.2
The applicant shall have:

a) gained, under appropriate supervision, experience in the applicable type of RPA and associated RPS and/or FSTD in the following:

1) normal flight procedures and manoeuvres during all phases of flight;

2) abnormal and emergency procedures and manoeuvres in the event of failures and malfunctions of equipment, such as engine, C2 link, systems and airframe;

3) instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure; and

4) for the issue of an aeroplane category type rating, upset prevention and recovery training.

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

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

Note.— See 2.11.7.1 on the qualifications required for remote pilots giving RPAS training.

b) demonstrated the competencies required for the safe operation of the applicable type of RPA and associated RPS and demonstrated C2 link management skills, relevant to the duties of a remote pilot-in-command or a remote co-pilot as applicable.

2.11.6 Use of a FSTD for acquisition of experience and demonstration of competencies

The use of a FSTD for acquiring the experience or performing any manoeuvre required during the demonstration of competencies for the issue of a remote pilot licence or rating shall be approved by CAAM, which shall ensure that the FSTD used is appropriate to the task.

2.11.7 Circumstances in which authorisation to conduct remote pilot licence training is required

2.11.7.1 A remote pilot licence holder issued by CAAM, shall not carry out remote pilot licence training required for the issue of a remote pilot licence or rating, unless such holder has received proper authorisation from CAAM. Proper authorisation shall comprise:

a) an RPAS instructor rating on the holder’s remote pilot licence; or

b) the authority to act as an agent of an approved training organisation authorised by CAAM to carry out remote pilot licence training; or

c) a specific authorisation granted by CAAM.

2.11.7.2 CAAM shall not permit a person to carry out remote pilot licence training on a FSTD required for the issue of a remote pilot licence or rating unless such person holds or has held an appropriate remote pilot licence or has appropriate

RPAS training and flight experience and has received proper authorisation from CAAM.

2.11.8 Crediting of RPAS flight time

2.11.8.1 A student remote pilot shall be entitled to be credited in full with all solo and dual instruction RPAS flight time towards the total flight time required for the initial issue of a remote pilot licence.

2.11.8.2 The holder of a remote pilot licence shall be entitled to be credited in full with all dual instruction RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade.

2.11.8.3 The holder of a remote pilot licence shall be entitled to be credited in full with all solo or dual instruction RPAS flight time, in a new category of RPA or for obtaining a new rating, towards the total RPAS flight time required for that rating.

2.11.8.4 The holder of a remote pilot licence, when acting as remote co-pilot of an RPA certificated for operation by a single remote pilot but required by CAAM to be operated with a remote co-pilot, shall be entitled to be credited with not more than 50% of the remote co-pilot RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade. CAAM may authorise that RPAS flight time be credited in full towards the total RPAS flight time required if the RPAS is equipped to be operated by a remote co-pilot and is operated in a multi-crew operation.

2.11.8.5 The holder of a remote pilot licence, when acting as remote co-pilot of an RPA certificated to be operated with a remote co-pilot, shall be entitled to be credited in full with this RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade.

2.11.8.6 The holder of a remote pilot licence, when acting as remote pilot-in-command under supervision, shall be entitled to be credited in full with this RPAS flight time towards the total RPAS flight time required for a remote pilot-in-command upgrade.

2.11.8.7 When applying for a new rating, the holder of a remote pilot licence shall be entitled to be credited with RPAS flight time experience as a remote pilot of RPA. CAAM will determine whether such experience is acceptable and, if so, the extent to which the experience requirements for the issue of a rating can be reduced accordingly.

Note.— The total RPAS flight time required is derived from the approved competency-based training program.

2.11.9 Limitation of privileges of remote pilots who attain their 60th birthday and curtailment of privileges of remote pilots who attain their 65th birthday

Remote pilot licence holders issued by CAAM, shall not act as pilot of an RPAS engaged in international commercial air transport operations if the licence holders have attained their 60th birthday or, in the case of operations with more than one pilot, their 65th birthday.

2.12 Student remote pilot

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

2.12.2 A student remote pilot shall not fly an RPA solo unless under the supervision of, or with the authority of, an authorised RPAS instructor.

2.12.2.1 A student remote pilot shall not fly an RPA solo on international RPAS operations unless by special or general arrangement between the Contracting States concerned.

2.12.3 Medical fitness
A student remote pilot shall not fly an RPA solo unless he holds a current Class 3 or a current Class 1 Medical Assessment.

Note.— A Class 1 medical assessment may be essential for a particular individual based on their work environment and responsibilities in the context of a specific RPAS application.

2.13 Remote pilot licence

Note.— The provisions of Chapter 2, subsection B are for international IFR operations of RPAS.

2.13.1 General requirements for the issue of the remote pilot licence

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

2.13.1.2 Knowledge
The applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a remote pilot licence and appropriate to the category of RPA and associated RPS intended to be included in the remote pilot licence, in at least the following subjects:

a) Air law

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

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

b) General RPAS knowledge

1) principles of operation and the functioning of engines, systems and instruments;

2) operating limitations of the relevant category of RPA and engines; relevant operational information from the flight manual or other appropriate document;

3) use and serviceability checks of equipment and systems of appropriate RPA;

4) maintenance procedures for airframes, systems and engines of appropriate RPA;

5) use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of an RPA under IFR and in instrument meteorological conditions;

6) flight instruments; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;

7) RPS general knowledge:

i) principles of operation and function of systems and instruments;
ii) use and serviceability checks of equipment and systems of appropriate RPS;
iii) procedures in the event of malfunctions;

8) C2 link general knowledge:

i) different types of C2 links and their operating characteristics and limitations;
ii) use and serviceability checks of C2 link systems;
iii) procedures in the event of C2 link malfunction;

9) detect and avoid capabilities for RPAS;

c) Flight performance, planning and loading

1) effects of loading and mass distribution on RPA handling, flight characteristics and performance; mass and balance calculations;

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

3) pre-flight and en-route flight planning appropriate to RPAS operations under IFR; preparation and submission of air traffic services flight plans under IFR; appropriate air traffic services procedures; altimeter setting procedures;

d) Human performance

1) human performance relevant to RPAS and instrument flight, including principles of TEM;

e) Meteorology

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

2) aeronautical meteorology; climatology of relevant areas with respect to the elements having an effect on aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;

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

4) in the case of high altitude operations, practical high altitude meteorology, including interpretation and use of weathers reports, charts and forecasts; jetstreams;

f) Navigation

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

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

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

4) principles and characteristics of self-contained and external-referenced navigation systems; operation of RPAS equipment;

g) Operational procedures

1) application of TEM to operational performance;

2) 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;

3) altimeter setting procedures;

4) appropriate precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria;

5) operational procedures for carriage of freight; potential hazards associated with dangerous goods and their management;

6) requirements and practices for safety briefings to remote flight crew members

7) operational procedures for handovers and coordination;

8) operational procedures for normal and abnormal C2 link operations;

h) Principles of flight

1) principles of flight; and

i) Radiotelephony

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

2.13.1.3 Skill

2.13.1.3.1 The applicant shall have demonstrated all the competencies of the adapted competency model approved by CAAM at the level required, to act as remote pilot in command of an RPAS operation within the appropriate category of RPA and associated RPS.

2.13.1.3.2 If the privileges of the remote pilot are to be exercised on a multi-engined RPA, the applicant shall have demonstrated the ability to operate under IFR with degraded propulsion capabilities.

2.13.1.4 Medical fitness

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

Note.— A Class 1 Medical Assessment may be essential for a particular individual based on their work environment and responsibilities in the context of a specific RPAS application.

2.13.2 Privileges of the holder of the remote pilot licence and the conditions to be observed in exercising such privileges

2.13.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.11, the privileges of the holder of a remote pilot licence shall be:

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

b) to act as remote co-pilot of an RPA and associated RPS, required to be operated with a remote co-pilot;

c) to act as a remote pilot-in-command of an RPA and the associated RPS, required to be operated with a remote co-pilot; and

d) to act either as remote pilot-in-command or as remote co-pilot of an RPAS under IFR.

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

Note.— Certain privileges of the remote pilot licence are curtailed by 2.11.9 for remote pilot licence holders when they attain their 60th and 65th birthdays.

2.13.3 Specific requirements for the issue of remote pilot licence

2.13.3.1 Experience

The applicant shall have gained experience during training in operating the RPA and associated RPS to successfully demonstrate the competencies required in 2.13.1.3.

2.13.3.2 Remote pilot licence training

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

2.13.3.2.2 During the training, the applicant shall have acquired the competencies and underpinning skills required for performing as a remote pilot of an RPA certificated for operation under IFR.

2.13.3.2.3 The applicant shall have received dual remote pilot licence training in an RPA and associated RPS, sought from an authorised RPAS instructor. The RPAS instructor shall ensure that the applicant has operational experience in all phases of flight and the entire operating envelope of an RPAS, including abnormal and emergency conditions, upset prevention and recovery training for the categories concerned, as well as IFR operations.

2.13.3.2.4 If the privileges of the remote pilot are to be exercised on a multi-engined RPA, the applicant shall have received dual instrument remote pilot licence training in a multi-engined RPA within the appropriate category from an authorised RPAS instructor. The RPAS instructor shall ensure that the applicant has operational experience in the operation of the RPA within the appropriate category with engines inoperative or simulated inoperative.

2.14 RPAS instructor rating

2.14.1 Requirements for the issue of the rating

2.14.1.1 Knowledge

2.14.1.1.1 The applicant shall demonstrate the ability to effectively assess trainees against the adapted competency model used in the approved training program.

2.14.1.1.2 The applicant shall successfully complete the training and meet the qualifications of an approved training organisation appropriate to the delivery of competency-based training programs.

2.14.1.1.3 The RPAS instructor training program shall focus on the development of competence in the following specific areas:

a) the adapted competency model of the remote pilot training program according to the defined grading system used by the RPAS operator or approved training organisation;

b) in accordance with the assessment and grading system of the RPAS operator or approved training organisation, making assessments by observing behaviours; gathering objective evidence regarding the observable behaviours of the adapted competency model used;

c) recognising and highlighting performance that meets competency standards;

d) determining root causes for deviations below the expected standards of performance; and

e) identifying situations that could result in unacceptable reductions in safety margins.

2.14.1.1.4 The applicant shall have met the competency requirements for the issue of a remote pilot licence as appropriate to the category of RPA and associated RPS.

2.14.1.1.5 In addition, the applicant shall have demonstrated a level of competency appropriate to the privileges granted to the holder of an RPAS instructor rating, in at least the following areas:

a) techniques of applied instruction;

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

c) the learning process;

d) elements of effective teaching;

e) competency-based training principles, including student assessments;

f) evaluation of the training program effectiveness;

g) lesson planning;

h) classroom instructional techniques;

i) use of training aids, including FSTDs as appropriate;

j) analysis and correction of student errors;

k) human performance relevant to RPAS, instrument flight and remote pilot licence training, including principles of TEM; and

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

2.14.1.2 Skill

2.14.1.2.1 The applicant shall have successfully performed a formal competency assessment, prior to conducting instruction and assessment within a competency-based training program.

2.14.1.2.2 The competency assessment shall be conducted during a practical training session in the category of RPA and associated RPS for which RPAS instructor privileges are sought, including pre-flight, post-flight and ground instruction as appropriate.

2.14.1.2.3 The competency assessment shall be conducted by a person authorised by CAAM.

2.14.1.3 Experience

2.14.1.3.1 The applicant shall have met the requirements for the issue of a remote pilot licence, shall maintain competencies and meet the recent experience requirements for the licence.

2.14.1.3.2 The applicant shall have sufficient training and experience to attain the required level of proficiency in all of the required tasks, manoeuvres, operations and principles, and methods of instruction relevant to 2.13.3.2.

2.14.1.4 Remote pilot licence training.
The applicant shall, under the supervision of an RPAS instructor authorised by CAAM for that purpose:

a) have received training in RPAS instructional techniques including demonstration, student practices, recognition and correction of common student errors; and

b) have practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide remote pilot licence training.

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

2.14.2.1 Subject to compliance with the requirements specified in 1.2.5 and 2.11, the privileges of the holder of an RPAS instructor rating shall be:

a) to supervise solo flights by student remote pilots; and

b) to carry out remote pilot licence training for the issue of a remote pilot licence and an RPAS instructor rating provided that the RPAS instructor:

1) holds at least the remote pilot licence and rating for which instruction is being given, in the appropriate RPA category and associated RPS;

2) holds the remote pilot licence and rating necessary to act as the remote pilot-in-command of the RPA category and associated RPS on which the instruction is given; and

3) has the RPAS instructor privileges granted endorsed on the remote pilot licence.

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

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3 Licences for Flight Crew Members Other Than Licences for Pilots

3.1 General rules concerning flight navigator and flight engineer licences

RESERVED

3.2 Flight navigator licence

RESERVED

3.3 Flight engineer licence

RESERVED

3.4 Flight radiotelephony operator licence

3.4.1 No person may operate an aircraft radio station in the air, or on the ground, unless they are in possession of a valid Flight Radiotelephony Operator Licence (FRTOL), or are operating directly under the supervision of the holder of a FRTOL.

3.4.2 The holder of a Flight Radiotelephony Operator's Licence is entitled to operate radiotelephony apparatus in any aircraft if the stability of the frequency radiated by the transmitter is maintained automatically but is not entitled to operate the transmitter, or to adjust its frequency, except by the use of external switching devices.

3.4.3 A person may not act as a flight radiotelephony operator within Malaysia without being the holder of an appropriate licence granted or rendered valid under this unless he is being trained in an aircraft registered in the Malaysia to perform duties as a member of the flight crew of an aircraft.

3.4.4 Age

3.4.4.1 The applicant shall be not less than 17 years of age.

3.4.5 Written examination and practical test

3.4.5.1 An applicant for the FRTOL shall pass a theoretical VFR Communications examination and a practical RT Communications test. Authorised RT Examiners conduct the practical test for the FRTOL. Upon successfully passing of the examination and test an FRTOL can be issued.

3.4.5.2 An applicant for an FRTOL shall pass the theoretical VFR Communications examination prior to attempting the practical test.

3.4.5.3 Validity of examinations and tests – The VFR Communications examination is valid for issue of the FRTOL for a period of 24 months from the date of passing the examination. A pass in the practical RT Communications test is valid for the grant of the FRTOL for 24 months. If any validity period is exceeded the examination or practical test as applicable must be passed again before the

FRTOL is issued. Where the VFR Communications examination is taken together with the theoretical knowledge examinations for the issue of a pilot licence, and all examinations are passed within the appropriate period, an application for the FRTOL can be made as part of the pilot licence application. In this case, the VFR Communications examination will be valid for 24 months following the final theoretical knowledge examination.

3.4.5.4 The holder of a FTROL issued by an ICAO contracting state wishing to obtain the Malaysian equivalent, should consult the CAAM for advice on the requirements which may apply.

3.4.6 A FRTOL once issued, does not expire, but it is not valid unless the holder has language proficiency in English at Level 6, or at Level 4 or 5 that has not expired.

4 Licences and Ratings for Personnel Other Than Flight Crew Members

4.1 General rules concerning licences and ratings for personnel other than flight crew members

4.1.1 An applicant shall, before being issued with any licence or rating for personnel other than flight crew members, meet such requirements in respect of age, knowledge, experience and where appropriate, medical fitness and skill, as are specified for that licence or rating.

4.1.2 An applicant, for any licence or rating for personnel other than flight crew members, shall demonstrate, in a manner determined by the Licensing Authority, such requirements in respect of knowledge and skill as are specified for that licence or rating.

4.2 Aircraft maintenance personnel

4.2.1 Requirements for the issue of the licence

4.2.1.1 Age

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

4.2.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge relevant to the privileges to be granted and appropriate to the responsibilities of an aircraft maintenance licence holder, in at least in the following subjects, but not limited to:

a) Air law and airworthiness requirements

1) rules and regulations relevant to an aircraft maintenance licence holder including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organization and procedures;

b) Natural science and aircraft general knowledge

1) basic mathematics; units of measurement; fundamental principles and theory of physics and chemistry applicable to aircraft maintenance;

c) Aircraft engineering

1) characteristics and applications of the materials of aircraft construction including principles of construction and functioning of aircraft structures, fastening techniques; engines and their associated systems; mechanical, fluid, electrical and electronic power sources;

aircraft instrument and display systems; aircraft control systems; and airborne navigation and communication systems;

d) Aircraft maintenance

1) tasks required to ensure the continuing airworthiness of an aircraft including methods and procedures for the overhaul, repair, inspection, replacement, modification or defect rectification of aircraft structures, components and systems in accordance with the methods prescribed in the relevant Maintenance Manuals and the applicable Standards of airworthiness; and

e) Human performance

1) human performance, including principles of TEM, relevant to aircraft maintenance.

4.2.1.3 Experience

The applicant shall have had the following experience in the inspection, servicing and maintenance of aircraft or its components:

a) for the issue of a licence with privileges for the aircraft in its entirety, at least:

1) four years; or

2) two years if the applicant has satisfactorily completed an approved training course; and

b) for the issue of a licence with privileges restricted in accordance with 4.2.2.2 a) 2) or 3), a period of time that will enable a level of competency equivalent to that required in a) to be attained, provided that this is not less than:

1) two years; or

2) such a period as the CAAM considers necessary to provide an equivalent level of practical experience to applicants who have satisfactorily completed an approved training course.

4.2.1.4 Training

Note.- Detailed training requirements are found in the relevant paragraphs of CAD 1811 – Maintenance Training Organisation Approval

4.2.1.5 Skill

The applicant shall have demonstrated the ability to perform those functions applicable to the privileges to be granted.

Note.- Detailed requirements can be referred to CAD 1801 - Aircraft Maintenance Licence

4.2.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

4.2.2.1 Subject to compliance with the requirements specified in 4.2.2.2 and 4.2.2.3, the privileges of the holder of an aircraft maintenance licence shall be to certify the aircraft or parts of the aircraft as airworthy after an authorised repair, modification or installation of an engine, accessory, instrument, and/or item of equipment, and to sign a maintenance release following inspection, maintenance operations and/or routine servicing.

4.2.2.2 The privileges of the holder of an aircraft maintenance licence specified in 4.2.2.1 shall be exercised only:

a) in respect of such:

1) aircraft as are entered on the licence in their entirety either specifically or under broad categories; or

2) airframes and engines and aircraft systems or components as are entered on the licence either specifically or under broad categories; and/or

3) aircraft avionic systems or components as are entered on the licence either specifically or under broad categories;

b) provided that the licence holder is familiar with all the relevant information relating to the maintenance and airworthiness of the particular aircraft for which the licence holder is signing a Maintenance Release, or such airframe, engine, aircraft system or component and aircraft avionic system or component which the licence holder is certifying as being airworthy; and

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

4.2.2.3 RESERVED

4.2.2.4 When the CAAM authorises an approved maintenance organisation to appoint non-licensed personnel to exercise the privileges of 4.2.2, the person appointed shall meet the requirements specified in 4.2.1.

Note.- Detailed privileges of aircraft maintenance personnel can be referred to paragraph 2 of CAD 1801 - Aircraft Maintenance Licence

4.2.3 *RESERVED*

4.3 Student air traffic controller

4.3.1 ATS Units shall take the appropriate measures to ensure that student air traffic controllers do not constitute a hazard to air navigation.

4.3.2 Medical fitness

A student air traffic controller shall not receive instruction in an operational environment unless that student air traffic controller holds a current Class 3 Medical Assessment.

4.4 Air traffic controller licence

4.4.1 Requirements for the issue of the licence

An applicant for air traffic controller licence issued by CAAM shall be required to meet the requirements of 4.4.1 and the requirements of at least one of the ratings set out in 4.5.

4.4.1.1 Age

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

4.4.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the holder of an air traffic controller licence, in at least the following subjects:

a) Air law

1) rules and regulations relevant to the air traffic controller;

b) Air traffic control equipment

1) principles, use and limitations of equipment used in air traffic control;

c) General knowledge

1) until 2 November 2022, principles of flight; principles of operation and functioning of aircraft, engines and systems; aircraft performance relevant to air traffic control operations;

note.- as of 3 November 2022, principles of flight; principles of operation and functioning of aircraft and RPAS, engines and systems; aircraft performance relevant to air traffic control operations;

d) Human performance

1) human performance including principles of TEM;

e) *Meteorology*

1) aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;

f) *Navigation*

1) principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and

g) Operational procedures

1) air traffic control, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

4.4.1.3 Experience

The applicant shall have completed 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. The experience requirements specified for air traffic controller ratings in 4.5 may be credited as part of the experience specified in this paragraph.

4.4.1.4 Medical fitness

The applicant shall hold a current Class 3 Medical Assessment.

4.5 Air traffic controller ratings

4.5.1 Categories of air traffic controller ratings Air traffic controller ratings shall comprise the following categories:

a) aerodrome control rating;

b) approach control procedural rating;

c) approach control surveillance rating;

d) approach precision radar control rating;

e) area control procedural rating; and

f) area control surveillance rating.

4.5.2 Requirements for air traffic controller ratings

4.5.2.1 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following subjects in so far as they affect the area of responsibility:

a) aerodrome control rating:

1) aerodrome layout; physical characteristics and visual aids;

2) airspace structure;

3) applicable rules, procedures and source of information;

4) air navigation facilities;

5) air traffic control equipment and its use;

6) terrain and prominent landmarks;

7) characteristics of air traffic;

8) weather phenomena; and

9) emergency and search and rescue plans;

b) approach control procedural and area control procedural ratings:

1) airspace structure;

2) applicable rules, procedures and source of information;

3) air navigation facilities;

4) air traffic control equipment and its use;

5) terrain and prominent landmarks;

6) characteristics of air traffic and traffic flow;

7) weather phenomena; and

8) emergency and search and rescue plans; and

c) approach control surveillance, approach precision radar control and area control surveillance ratings: The applicant shall meet the requirements specified in b) in so far as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects:

1) principles, use and limitations of applicable ATS surveillance systems and associated equipment; and

2) procedures for the provision of ATS surveillance service, as appropriate, including procedures to ensure appropriate terrain clearance.

4.5.2.2 Experience

4.5.2.2.1 The applicant shall have:

a) satisfactorily completed an approved training course;

b) provided, satisfactorily, under the supervision of an appropriately rated air traffic controller:

1) 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;

2) approach control procedural, approach control surveillance, area control procedural or area control surveillance rating: the control service for which the rating is sought, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought; and

3) approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by CAAM. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and

c) if the privileges of the approach control surveillance rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated controller.

4.5.2.2.2 The experience specified in 4.5.2.2.1 b) shall have been completed within the 6-month period immediately preceding application.

4.5.2.2.3 When the applicant has already held an air traffic controller rating in another category, the requirement in 4.5.2.1 shall be followed. CAAM may approve application for reduction of training period subject to recommendation by OJT Instructor and the Head of Unit. or the same rating from another unit, the requirements are as follows:

4.5.2.2.4 When applicant has already held the same rating from other unit, the training period for a recurrent validation shall be:

a) ninety (90) hours or one (1) month, whichever is achieved later; or

b) a duration as approved by CAAM

4.5.2.3 Skill

The applicant shall have demonstrated, at a level appropriate to the privileges being granted, the skill, judgement and performance required to provide a safe, orderly and expeditious control service, including the recognition and management of threats and errors.

4.5.2.4 Concurrent issuance of two air traffic controller ratings

The ratings for aerodrome and approach control procedural may be sought concurrently at ATS unit providing combined aerodrome and approach control procedural services in accordance with procedure established in CAD 1201 paragraph 2.4.

Note.— The requirements for demonstration of appropriate and satisfactory knowledge are established in CAD 1201.

4.5.3 Privileges of the holder of the air traffic controller rating(s) and the conditions to be observed in exercising such privileges

4.5.3.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1 and 1.2.9, the privileges of the holder of an air traffic controller licence endorsed with one or more of the undermentioned ratings shall be:

a) aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the licence holder is rated;

b) approach control procedural rating: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

c) approach control surveillance rating: to provide and/or supervise the provision of approach control service with the use of applicable ATS surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

1) subject to compliance with the provisions of 4.5.2.2.1 c), the privileges shall include the provision of surveillance radar approaches;

d) approach precision radar control rating: to provide and/or supervise the provision of precision approach radar service at the aerodrome for which the licence holder is rated;

e) area control procedural rating: to provide and/or supervise the provision of area control service within the control area or portion thereof, for which the licence holder is rated; and

f) area control surveillance rating: to provide and/or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the licence holder is rated.

4.5.3.2 Before exercising the privileges indicated in 4.5.3.1, the licence holder shall be familiar with all pertinent and current information.

4.5.3.3 An air traffic controller licence holder shall not carry out instruction in an operational environment unless such holder has received proper authorisation from CAAM.

4.5.3.4 Validity of ratings

A rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period determined by CAAM. That period shall not exceed 180 days. A rating shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.

4.6 Flight operations officer/flight dispatcher licence

Note.— Presently CAAM does not issue licence to flight operations officer/flight dispatcher but personnel exercising the privileges shall be required to fulfil requirements mentioned in 4.6 of this CAD.

4.6.1 Requirements for the issue of the licence

4.6.1.1 Age

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

4.6.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight operations officer licence, in at least the following subjects:

a) Air law

1) rules and regulations relevant to the holder of a flight operations officer licence; appropriate air traffic services practices and procedures;

b) Aircraft general knowledge

1) principles of operation of aeroplane engines, systems and instruments;

2) operating limitations of aeroplanes and engines;

3) minimum equipment list;

c) Flight performance calculation, planning procedures and loading

1) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;

2) operational flight planning; fuel consumption and endurance calculations; alternate aerodrome selection procedures; en-route cruise control; extended range operation;

3) preparation and filing of air traffic services flight plans;

4) basic principles of computer-assisted planning systems;

d) Human performance

1) human performance relevant to dispatch duties, including principles of TEM;

e) Meteorology

1) 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;

2) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information;

f) Navigation

1) principles of air navigation with particular reference to instrument flight;

g) Operational procedures

1) use of aeronautical documentation;

2) operational procedures for the carriage of freight and dangerous goods;

3) procedures relating to aircraft accidents and incidents; emergency flight procedures;

4) procedures relating to unlawful interference and sabotage of aircraft;

h) Principles of flight

1) principles of flight relating to the appropriate category of aircraft; and

i) Radio communication

1) procedures for communicating with aircraft and relevant ground stations.

4.6.1.3 Experience

4.6.1.3.1 The applicant shall have gained the following experience:

a) a total of two years of service in any one or in any combination of the capacities specified in 1) to 3) inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least one year:

1) a flight crew member in air transport; or

2) a meteorologist in an organisation dispatching aircraft in air transport; or

3) an air traffic controller; or a technical supervisor of flight operations officers or air transport flight operations systems; or

b) at least one year as an assistant in the dispatching of air transport; or

c) have satisfactorily completed a course of approved training.

4.6.1.3.2 The applicant shall have served under the supervision of a flight operations officer for at least 90 working days within the six months immediately preceding the application.

4.6.1.4 Skill

The applicant shall have demonstrated the ability to:

a) identify and to retrieve aeronautical data and other information relevant for the analysis of operational situations and risks;

b) identify and evaluate the risk factors and the possible consequences for flight operations;

c) identify and evaluate actions considering risk, the effect on flight safety and regularity of the operation;

d) determine an appropriate course of action based on the responsibilities and policies described in the operation manuals;

e) apply appropriate standard and non-standard procedures from the operations manual for the initiation, planning, continuation, diversion or termination of flights in the interest of safety of the aircraft and regularity and efficiency of the operation;

f) make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports; provide an operationally valid briefing on weather conditions prevailing in the general neighbourhood of a specific air route; forecast weather trends pertinent to air transport with particular reference to destination and alternates;

g) identify and apply operational limitations and minimums in relation to the weather, aircraft status and appropriate navigation procedures;

h) determine the optimum flight path for a given segment, and create accurate manual and/or computer-generated flight plans;

i) 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; and

j) recognise and manage threats and errors.

4.6.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

Subject to compliance with the requirements specified in 1.2.5, the privileges of the 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 CAD 6.

4.7 Aeronautical station operator licence

Note 1.— Presently CAAM does not issue licence to aeronautical station operator but personnel exercising the privileges shall be required to fulfil requirements mentioned in 4.7 of this CAD.

Note 2.— This licence requirement is not intended for personnel providing AFIS. Guidance on the qualifications to be met by these personnel can be found in Circular 211, Aerodrome Flight Information Service (AFIS).

4.7.1 Requirements for aeronautical station operator.

4.7.1.1 Individuals may operate as aeronautical station operators on the condition they meet the requirements in 4.7.1.2 to 4.7.1.5.

4.7.1.2 Age

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

4.7.1.3 Knowledge

The individual shall have demonstrated a level of knowledge appropriate to the holder of an aeronautical station operator, in at least the following subjects:

a) General knowledge

air traffic services provided within Malaysia;

b) Operational procedures

radiotelephony procedures; phraseology; telecommunication network;

c) Rules and regulations

rules and regulations applicable to the aeronautical station operator; and

d) Telecommunication equipment

principles, use and limitations of telecommunication equipment in an aeronautical station.

4.7.1.4 Experience

The individual shall have satisfactorily completed an approved training and have served satisfactorily under a qualified aeronautical station operator for not less than two months. The guidance for aeronautical station operator approved training are available in CAD 1201 paragraph 3.8.

4.7.1.5 Skill

The individual shall demonstrate, or have demonstrated, competency in:

a) operating the telecommunication equipment in use; and

b) transmitting and receiving radiotelephony messages with efficiency and accuracy.

4.7.2 Condition to be observed as aeronautical operator.

Subject to compliance with the requirements specified in 4.7.1.2 until 4.7.1.5 an individual operating as aeronautical station operator shall hold at least operational language proficiency Level 4 and be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at that aeronautical station.

4.8 Aeronautical meteorological personnel

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5 Specifications for Personnel Licences

5.1 Personnel licences issued by CAAM in accordance with the relevant provisions of this CAD shall conform to the following specifications:

5.1.1 Detail

5.1.1.1 CAAM shall issue licences which specifications will easily determine the licence privileges and validity of ratings within.

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

5.1.1.2 The following details shall appear on the licence:

1) Name of State (in bold type);
2) Title of licence (in very bold type);
3) Serial number of the licence, in Arabic numerals, given by the authority issuing the licence;
4) Name of holder in full (in Roman alphabet also if script of national language is other than Roman);
5) Address of holder if desired by the State;
6) Nationality of holder;
7) Signature of holder;
8) Authority and, where necessary, conditions under which the licence is issued;
9) Certification concerning validity and authorisation for holder to exercise privileges appropriate to licence;
10) Signature of officer issuing the licence and the date of such issue;
11) Seal or stamp of authority issuing the licence;
12) Ratings, e.g. category, class, type of aircraft, airframe, aerodrome control, etc.;
13) Remarks, i.e. special endorsements relating to limitations and endorsements for privileges, including an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention; and
14) Any other details desired by the State issuing the licence.

5.1.2 Material

First quality paper or other suitable material, including plastic cards, shall be used and the items mentioned in 5.1.1.2 shown clearly thereon.

5.1.3 Language

When licences are issued in a language other than English, the licence shall include an English translation of at least items 1), 2), 6), 9), 12), 13) and 14). When provided in a language other than English, authorisations issued in accordance with1.3.2.1 shall include an English translation, the limit of validity of the authorisation and any restriction or limitation that may be established.

5.1.4 Arrangement of items

Item headings on the licence shall be uniformly numbered in Arabic numerals as indicated in 5.1.1, so that on any licence the number will, under any arrangement, refer to the same item heading.

6 Medical Provisions for Licensing

Note.- For the purpose of this chapter, CAD 1004 – Civil Aviation Medical Requirements (MED) contains further requirements pertaining to medical provisions for licensing.

6.1 Medical assessments — General

6.1.1 Classes of Medical Assessment Three classes of Medical Assessment have been established as follows:

a) Class 1 Medical Assessment; applies to applicants for, and holders of:

1) commercial pilot licences — aeroplane and helicopter
2) multi-crew pilot licences — aeroplane
3) airline transport pilot licences — aeroplane and helicopter

b) Class 2 Medical Assessment; applies to applicants for, and holders of:

1) private pilot licences — aeroplane and helicopter
2) student pilot licences – aeroplane and helicopter
3) free balloon pilot licences

c) Class 3 Medical Assessment; applies to applicants for, and holders of:

1) air traffic controller licences
2) student air traffic controllers receiving instructions in an operating environment
3) as of 3 November 2022, remote pilot licences.

6.1.2 Refer to CAD 1004 – MED paragraph 2.1.2.2.

6.1.3 Refer to CAD 1004 – MED paragraph 2.10.3.

6.1.4 The level of medical fitness to be met for the renewal of a Medical Assessment shall be the same as that for the initial assessment except where otherwise specifically stated.

6.2 Requirements for medical assessments

6.2.1 General

6.2.1.1 Refer to CAD 1004 – MED paragraph 2.4.1.

6.2.2 Physical and mental requirements

6.2.2.1 Refer to CAD 1004 – MED paragraph 2.4.2.

6.2.3 Visual acuity test requirements

6.2.3.1 Refer to CAD 1004 – MED paragraph 9.14.

6.2.4 Colour perception requirements

6.2.4.1 Refer to CAD 1004 – MED paragraph 2.4.3.

6.2.5 Hearing test requirements

6.2.5.1 Refer to CAD 1004 – MED paragraph 2.4.4.

6.3 Class 1 medical assessment

6.3.1 Assessment issue and renewal

6.3.1.1 An applicant for a commercial pilot licence —aeroplane and helicopter, a multi-crew pilot licence — aeroplane, or an airline transport pilot licence — aeroplane and helicopter shall undergo an initial medical examination for the issue of a Class 1 Medical Assessment.

6.3.1.2 Except where otherwise stated in this section, holders of commercial pilot licences — aeroplane and helicopter, multi-crew pilot licences — aeroplane, or airline transport pilot licences — aeroplane and helicopter shall have their Class 1 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.3.1.3 When CAAM is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 1 Medical Assessment shall be issued to the applicant.

6.3.2 Physical and mental requirements

6.3.2.1 Refer to CAD 1004 – MED paragraph 9.2 to 9.13.

6.3.3 Visual requirements

6.3.3.1 Refer to CAD 1004 – MED paragraph 9.14.

6.3.4 Hearing requirements

6.3.4.1 Refer to CAD 1004 – MED paragraph 9.16.

6.4 Class 2 medical assessment

6.4.1 Assessment issue and renewal

6.4.1.1 An applicant for a private pilot licence — aeroplane, helicopter and a free balloon pilot licence, shall undergo an initial medical examination for the issue of a Class 2 Medical Assessment.

6.4.1.2 Except where otherwise stated in this section, holders of student pilot licences, private pilot licences — aeroplane or helicopter, free balloon pilot licences,

licences shall have their Class 2 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.4.1.3 When CAAM is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 2 Medical Assessment shall be issued to the applicant.

6.4.2 Physical and mental requirements

6.4.2.1 Refer to CAD 1004 – MED paragraph 9.2 to 9.13.

6.4.3 Visual requirements

6.4.3.1 Refer to CAD 1004 – MED paragraph 9.14.

6.4.4 Hearing requirements

6.4.4.1 Refer to CAD 1004 – MED paragraph 9.16.

6.5 Class 3 medical assessment

6.5.1 Assessment issue and renewal

6.5.1.1 Until 2 November 2022, an applicant for an air traffic controller licence shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

Note.- As of 3 November 2022, an applicant for an air traffic controller licence or remote pilot licence shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

6.5.1.2 Until 2 November 2022, except where otherwise stated in this section, holders of air traffic controller licences shall have their Class 3 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

Note.- As of 3 November 2022, except where otherwise stated in this section, holders of air traffic controller licences or remote pilot licences shall have their Class 3 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.5.1.3 When CAAM is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 3 Medical Assessment shall be issued to the applicant.

6.5.2 Physical and mental requirements

6.5.2.1 Refer to CAD 1004 – MED paragraph 9.2 to 9.13.

6.5.3 Visual requirements

6.5.3.1 Refer to CAD 1004 – MED paragraph 9.14.

6.5.4 Hearing requirements

6.5.4.1 Refer to CAD 1004 – MED paragraph 9.16.

7 Appendices

7.1 Appendix 1 - Requirements for proficiency in languages used for radiotelephony communications

(Chapter 1, Section 1.2.9, refers)

1. General

To meet the language proficiency requirements contained in Chapter 1, Section 1.2.9, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to CAAM, compliance with the holistic descriptors at Section 2 and with the ICAO Operational Level (Level 4) of the ICAO Language Proficiency Rating Scale in Attachment A.

2. Holistic descriptors

Proficient speakers shall:

a) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;

b) communicate on common, concrete and work-related topics with accuracy and clarity;

c) use appropriate communicative strategies to exchange messages and to recognise and resolve misunderstandings (e.g. 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.

Note.- Refer to CAD 1007 – ELPT for further requirements on ELPT.

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7.2 Appendix 2 - Approved Training Organisation

(Chapter 1, 1.2.8.2 refers)

Refer to CAD 1011 – ATO and CAD 1002 – FC for flight crew related training organisation, and CAD 1811 – MTO (CAAM PART-147) for maintenance personnel related training organisation.

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7.3 Appendix 3 - Requirements for the issue of the multi-crew pilot licence — Aeroplane

(Chapter 2, Section 2.5, refers)

1 General

1.1 The aim of the MPL integrated course is to train pilots to the level of proficiency necessary to enable them to operate as co-pilot of a multi-engine multi-pilot turbine-powered air transport aeroplane under VFR and IFR and to obtain an MPL.

1.2 Approval for an MPL training course shall only be given to an ATO that is part of a CAT operator certificated in accordance with CAD 6004 - AOC or having a specific arrangement with such an operator.

1.3 An applicant for an MPL shall meet the requirements of 2.5.1.

1.4 Only ab-initio applicants shall be admitted to the course.

1.5 An applicant wishing to undertake an MPL integrated course shall complete all the instructional stages in one continuous course of training at an ATO. The training shall be competency based and conducted in a multi-crew operational environment. The training course shall be completed within 30 months from the first sitting of the theoretical knowledge examination with the following integrated structure;

a) Theoretical knowledge training phase – 12 months.

b) Flight and/or FSTD training phase – 18 months.

1.6 The holder of an MPL may obtain the extra privileges of:

a) the holder of a PPL(A), provided that the requirements for the PPL(A) specified in 2.3.3 are met;

b) a CPL(A), provided that the requirements specified in 2.4.3 are met.

1.7 The course shall comprise:

a) theoretical knowledge instruction to the ATPL(A) knowledge level;

b) visual and instrument flying training;

c) training in MCC for the operation of multi-pilot aeroplanes; and

d) type rating training.

1.8 An applicant failing or unable to complete the entire MPL course may apply to the CAAM for the theoretical knowledge examination and skill test for a licence with lower privileges and an IR, if the applicable requirements are met.

1.9 The holder of an MPL shall have the privileges of his IR(A) limited to aeroplanes required to be operated with a co-pilot. The privileges of the IR(A) may be extended to single-pilot operations in aeroplanes, provided that the licence

holder has completed the training necessary to act as pilot-in-command in single-pilot operations exercised solely by reference to instruments and passed the skill test of the IR(A) as a single-pilot.

2 Training course and theoretical knowledge examinations

2.1 Course. An applicant for an MPL shall have completed a training course of theoretical knowledge and flight instruction at an ATO. Theoretical knowledge and flight instruction for the issue of an MPL shall include upset prevention and recovery training.

2.2 Examination. An applicant for an MPL shall have demonstrated a level of knowledge appropriate to the holder of an ATPL(A), and of a multi-pilot type rating.

3 Flying training

3.1 An applicant for an MPL shall have demonstrated through continuous assessment the skills required for fulfilling all the competency units, as pilot flying (PF) and pilot monitoring (PM), in a multi-engine turbine-powered multi-pilot aeroplane, under VFR and IFR.

3.2 On completion of the training course, the applicant shall pass a skill test, to demonstrate the ability to perform the relevant procedures and manoeuvres with the competency appropriate to the privileges granted. The skill test shall be taken in the type of aeroplane used on the advanced phase of the MPL integrated training course or in an FFS representing the same type. This syllabus can be found in Appendix 4.

3.3 The flying training shall comprise a total of at least 240 hours, composed of hours as PF and PM, in actual and simulated flight, and covering the following 4 phases of training:

a) Phase 1 — Core flying skills

Specific basic single-pilot training in an aeroplane.

b) Phase 2 — Basic

Introduction of multi-crew operations and instrument flight.

c) Phase 3 — Intermediate

Application of multi-crew operations to a multi-engine turbine aeroplane certified as a high performance aeroplane in accordance with Initial Airworthiness.

d) Phase 4 — Advanced

Type rating training within an airline oriented environment.

MCC requirements shall be incorporated into the relevant phases above. Training in asymmetric flight shall be given either in an aeroplane or an FFS.

3.4 Flight experience in actual flight shall include:

a) all the experience requirements of 2.5.3.1;

b) aeroplane UPRT flight instruction and exercises related to the specificities of the relevant type in accordance with Appendix 12;

c) night flying;

d) flight solely by reference to instruments; and

e) the experience required to achieve the relevant airmanship.

3.5 Each phase of training in the flight instruction syllabus shall be composed of both instruction in the underpinning knowledge and in practical training segments.

3.6 The training course shall include a continuous evaluation process of the training syllabus and a continuous assessment of the students following the syllabus. Evaluation shall ensure that:

a) the competencies and related assessment are relevant to the task of a co-pilot of a multi-pilot aeroplane; and

b) the students acquire the necessary competencies in a progressive and satisfactory manner.

3.7 The training course shall include at least 12 take-offs and landings to ensure competency. Those take-offs and landings shall be performed under the supervision of an instructor in an aeroplane for which the type rating shall be issued. Those take-offs and landings may be reduced to at least six, provided that prior to delivering the training, the ATO and the operator ensure that:

a) a procedure is in place to assess the required level of competency of the student pilot; and

b) a process is in place to ensure that corrective action is taken if in-training evaluation indicates the need to do so.

3.8 The summary for MPL flying training requirements can be found in 7 of this appendix.

4 Assessment level

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

Note.- The training scheme for the multi-crew pilot licence in the aeroplane category, the ICAO aeroplane pilot competency framework and the methodology to adapt this framework for the multi-crew pilot licence are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

5 Simulated Flight

5.1 The FSTDs used to gain the experience specified in para 2.5.3.3, shall have been approved by the CAAM.

5.2 Minimum requirements for FSTDs:

a) Phase 1 — Core flying skills

E-training and part tasking devices approved by the CAAM that have the following characteristics:

1) involve accessories beyond those normally associated with desktop computers, such as functional replicas of a throttle quadrant, a side-stick controller, or an FMS keypad, and

2) involve psychomotor activity with appropriate application of force and timing of responses.

3) An FNPT I meets the requirement for this phase.

b) Phase 2 — Basic

An FNPT II MCC that represents a generic multi-engine turbine-powered aeroplane and has the following characteristics:

1) is equipped with a daylight visual system.

c) Phase 3 — Intermediate

An FSTD that represents a multi-engine turbine-powered aeroplane required to be operated with a co-pilot and qualified to an equivalent standard to FFS level B, additionally including:

1) a daylight/twilight/night visual system continuous cross-cockpit minimum collimated visual field of view providing each pilot with 180° horizontal and 40° vertical field of view,

2) ATC environment simulation; and

3) is equipped with an autopilot.

d) Phase 4 — Advanced

An FFS which is fully equivalent to level C or level D that represents a multi-engined turbine-powered aeroplane certificated for a crew of two pilots and has the following characteristics:

1) an enhanced daylight visual system, including ATC environment simulation; ATC environment simulation; and

2) is equipped with an autopilot

6 Requirements for MPL flying training

Phases of training	Training items	Flight and simulated flight training media - minimum level requirement -		Ground training media
Phase 4 – advanced Type rating training covering the training content of	• TEM and CRM • Landing training • LOFT • Abnormal procedures • Normal procedures • Type specific UPRT	Aeroplane: ME Multi-crew certified	6 to 12 take-offs and landings as PF One go-around with all engines operating	• E-learning • Part-task trainer • Classroom
		FSTD: • FS level D or C • ATC simulation	PF/PM	
Phase 3 – intermediate Application of multi-crew operations in a high-performance ME turbine aeroplane	• TEM and CRM • LOFT • Abnormal procedures • Normal procedures • Multi-crew • Instrument flight • Non-type-specific UPRT	FSTD: • *Representing an ME turbine-powered aeroplane to be operated with a co-pilot and qualified to an equivalent standard to level B* • ATC simulation	PF/PM	
Phase 2 – basic Introduction of multi-crew operations and instrument flight	• TEM and CRM • PF/PM complement • IFR cross-country • Instrument flight • Night flight	Aeroplane: SE or ME	PF/PM	
		FSTD: • FNPT II • MCC		
Phase 1 – core flying skills Specific basic single-pilot training	• TEM and CRM • VFD cross-country • Solo flight • Basic instrument flight • Principles of flight • Cockpit procedures • Upset recovery in an aeroplane • Night flight	Aeroplane: SE or ME	PF	
		FSTD: FNPT I or BITD		

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7.4 Appendix 4 - Training, skill test and proficiency check for PPL, CPL, MPL, ATPL, type and class ratings, and IRs

A. General

1. An applicant for a skill test shall have received instruction on the same class or type of aircraft to be used in the test.

   The training for multi-pilot aeroplane type rating shall be conducted in an FFS or in a combination of FSTD(s) and FFS. The skill test or proficiency check for multi-pilot aeroplane type rating and the issue of an ATPL and an MPL, shall be conducted in an FFS, if available.

   The training, skill test or proficiency check for class or type ratings for single pilot aeroplanes and helicopters shall be conducted in:

   (a) an available and accessible FFS, or

   (b) a combination of FSTD(s) and the aircraft if an FFS is not available or accessible;

   or

   (c) the aircraft if no FSTD is available or accessible.

   If FSTDs are used during training, testing or checking, the suitability of the FSTDs used shall be verified against the applicable 'Table of functions and subjective tests' and the applicable 'Table of FSTD validation tests' contained in the primary reference document applicable for the device used. All restrictions and limitations indicated on the device's qualification certificate shall be considered.

2. Failure to achieve a pass in all sections of the test in two attempts will require further training.

3. There is no limit to the number of skill tests that may be attempted.

Content Of The Training, Skill Test/Proficiency Check

4. Unless otherwise determined in the operational suitability data established in accordance with Initial Airworthiness, the syllabus of flight instruction, the skill test and the proficiency check shall comply with this Appendix. The syllabus, skill test and proficiency check may be reduced to give credit for previous experience on similar aircraft types, as determined in the operational suitability data established in accordance with Initial Airworthiness.

5. Except in the case of skill tests for the issue of an ATPL, when so defined in the operational suitability data established in accordance with Initial Airworthiness for the specific aircraft, credit may be given for skill test items common to other types or variants where the pilot is qualified.

Conduct of The Test Or Check

6. The examiner may choose between different skill test or proficiency check scenarios containing simulated relevant operations developed and approved by the CAAM. Full flight simulators and other training devices, when available, shall be used, as established in this CAD.

7. During the proficiency check, the examiner shall verify that the holder of the class or type rating maintains an adequate level of theoretical knowledge.

8. Should the applicant choose to terminate a skill test for reasons considered inadequate by the examiner, the applicant shall retake the entire skill test. If the test is terminated for reasons considered adequate by the examiner, only those sections not completed shall be tested in a further flight.

9. At the discretion of the examiner, any manoeuvre or procedure of the test may be repeated once by the applicant. The examiner may stop the test at any stage if it is considered that the applicant's demonstration of flying skill requires a complete re-test.

10. An applicant shall be required to fly the aircraft from a position where the PIC or co-pilot functions, as relevant, can be performed and to carry out the test as if there is no other crew member if taking the test/check under single- pilot conditions. Responsibility for the flight shall be allocated in accordance with national regulations.

11. During pre-flight preparation for the test the applicant is required to determine power settings and speeds. The applicant shall indicate to the examiner the checks and duties carried out, including the identification of radio facilities. Checks shall be completed in accordance with the check-list for the aircraft on which the test is being taken and, if applicable, with the MCC concept. Performance data for take-off, approach and landing shall be calculated by the applicant in compliance with the operations manual or flight manual for the aircraft used. Decision heights/altitude, minimum descent heights/altitudes and missed approach point shall be agreed upon with the examiner.

12. The examiner shall take no part in the operation of the aircraft except where intervention is necessary in the interests of safety or to avoid unacceptable delay to other traffic.

Specific Requirements for The Skill Test/Proficiency Check for Multi-pilot Aircraft Type Ratings, for Single-Pilot Aeroplane Type Ratings, When Operated In Multi-Pilot Operations, for MPL And ATPL

13. The skill test for a multi-pilot aircraft or a single-pilot aeroplane when operated in multi-pilot operations shall be performed in a multi-crew environment. Another applicant or another type rated qualified pilot may function as second pilot. If an aircraft is used, the second pilot shall be the examiner or an instructor.

14. The applicant shall operate as PF during all sections of the skill test, except for abnormal and emergency procedures, which may be conducted as PF or PM in accordance with MCC. The applicant for the initial issue of a multi- pilot aircraft type rating or ATPL shall also demonstrate the ability to act as PM. The applicant may choose either the left hand or the right hand seat for the skill test if all items can be executed from the selected seat.

15. The following matters shall be specifically checked by the examiner for applicants for the ATPL or a type rating for multi-pilot aircraft or for multi-pilot operations in a single-pilot aeroplane extending to the duties of a PIC, irrespective of whether the applicant acts as PF or PM:

(a) management of crew cooperation;

(b) maintaining a general survey of the aircraft operation by appropriate supervision;

and

(c) setting priorities and making decisions in accordance with safety aspects and relevant rules and regulations appropriate to the operational situation, including emergencies.

16. The test or check should be accomplished under IFR, if the IR rating is included, and as far as possible be accomplished in a simulated CAT environment. An essential element to be checked is the ability to plan and conduct the flight from routine briefing material.

17. When the type rating course has included less than 2 hours flight training on the aircraft, the skill test may be conducted in an FFS and may be completed before the flight training in the aircraft.

The approved flight training shall be performed by a qualified instructor under the responsibility of:

(a) an ATO; or

(b) an AOC holder and specifically approved for such training; or

(c) the instructor, in cases where no aircraft flight training for SP aircraft at an ATO or AOC holder is approved, and the aircraft flight training was approved by the CAAM.

A certificate of completion of the type rating course including the flight training in the aircraft shall be forwarded to the CAAM before the new type rating is entered in the applicant's licence.

18. For the upset recovery training, 'stall event' means either an approach-to-stall or a stall.

An FFS can be used to either train recovery from a stall or demonstrate the type-specific characteristics of a stall, or both, provided that:

(a) the FFS has been qualified in accordance with the special evaluation requirements in CS-FSTD(A); and

(b) the ATO has successfully demonstrated to the CAAM that any negative transfer of training is mitigated.

Specific Requirements for The Skill Test for the issue a CPL

19. The aeroplane used for the skill test shall have met the requirements for training aeroplanes and shall be certificated for the carriage of at least four persons, have a variable pitch propeller and retractable landing gear.

20. The helicopter used for the skill test shall have met the requirements for training helicopters.

21. The route to be flown shall be chosen by the DFE and the destination shall be a controlled aerodrome. The applicant shall be responsible for the flight planning

and shall ensure that all equipment and documentation for the execution of the flight are on board. The duration of the flight shall be at least 90 minutes.

22. For the case of helicopters, the skill test may be conducted in 2 flights.

Specific Requirements for The Skill Test for the issue a PPL

23. The route to be flown for the navigation test should be chosen by the DFE. The route may end at the aerodrome of departure or at another aerodrome. The applicant should be responsible for the flight planning and should ensure that all equipment and documentation for the execution of the flight are on board. The navigation section of the test should have a duration that allows the pilot to demonstrate his ability to complete a route with at least three identified waypoints and may, as agreed between the applicant and DFE, be flown as a separate test.

24. An applicant should indicate to the DFE the checks and duties carried out, including the identification of radio facilities. Checks should be completed in accordance with the authorised checklist for the aeroplane on which the test is being taken. During pre-flight preparation for the test the applicant should be required to determine power settings and speeds. Performance data for take-off, approach and landing should be calculated by the applicant in compliance with the operations manual or flight manual for the aeroplane used.

B. Specific requirements for the aeroplane category

Pass Marks

1. In the case of:

   a) single-pilot aeroplanes, with the exception of single-pilot high performance complex aeroplanes;

   b) skill test for the issuance of a PPL or CPL; and

   c) IR skill test.

   The applicant shall pass all sections of the skill test or proficiency check. If any item in a section is failed, that section is failed. Failure in more than one section will require the applicant to take the entire test or check again. Any applicant failing only one section shall be classified as a partial pass, and will require a re-test or re-check on the failed section again. Failure in any section of the re-test or re-check following a partial pass, including those sections that have been passed at a previous attempt will require the applicant to take the entire test or check again. For single-pilot multi-engine aeroplanes, section 6 of the relevant test or check, addressing asymmetric flight, shall be passed.

2. In the case of multi-pilot and single-pilot high performance complex aeroplanes, the applicant shall pass all sections of the skill test or proficiency check. Failure of more than five items will require the applicant to take the entire test or check again. Any applicant failing five or less items shall be classified as a partial pass and will require a re-test or re-check on the failed items again. Failure in any item on the re-test or re-check following a partial

pass, including those items that have been passed at a previous attempt will require the applicant to take the entire check or test again. Section 6 is not part of the ATPL or MPL skill test. If the applicant only fails or does not take section 6, the type rating will be issued without CAT II or CAT III privileges. To extend the type rating privileges to CAT II or CAT III, the applicant shall pass the section 6 on the appropriate type of aircraft.

Flight Test Tolerance

3. The applicant shall demonstrate the ability to:

(a) operate the aeroplane 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 aeroplane at all times in such a manner that the successful outcome of a procedure or manoeuvre is always assured;

(f) understand and apply crew coordination and incapacitation procedures, if applicable; and

(g) communicate effectively with the other crew members, if applicable.

4. The following limits shall apply, corrected to make allowance for turbulent conditions and the handling qualities and performance of the aeroplane used:

Aeroplane

Profile	PPL Skill Tests	CPL Skill Test	IR Skill Test & all other Rating Issues and Renewals
Altitude or Height			
Normal Flight	± 150 ft	± 100 ft	± 100 ft
With simulated engine failure (ME)	± 200 ft	± 150 ft	± 100 ft
Limited or partial panel		± 200 ft	± 200 ft
Starting go-around at decision alt/ht			+ 50 ft / - 0 ft
Minimum descent altitude / height			+ 50 ft / - 0 ft
'Not below' minima (from FAF altitude down to MDA/H)			*- 0 ft*
Circling minima			*+ 100 ft / - 0 ft*
Asymmetric committal height/altitude	*- 0 ft*	*- 0 ft*	*- 0 ft*
Tracking			
At all times when using a single-needle display	± 10° *	± 5°	± 5°
At all times when using a deviation bar display	Full Scale Deflection *	Half Scale Deflection	Half Scale Deflection Azimuth and Flight Path (Precision Approach)
DME arcing			± 1 nm
Heading			
All engines operating	± 10°	± 10°	± 5°
With simulated engine failure (ME)	± 15°	± 15°	± 10°
Limited or Partial panel		*± 15°*	*± 15°*
Speed			
Take-off and approach	+ 15 / - 5 kt	± 5 kt	± 5 kt
All other flight regimes	± 15 kt	± 10 kt	± 5 kt
Limited or Partial Panel			*± 10 kt*
With simulated engine failure			+ 10 / - 5 kt

- Entries in italics are suggested tolerances.
- Where a test is flown for more than one purpose, i.e. licence issue and class rating issue, examiners should be mindful of the less stringent tolerances shown above.

Content of the training/skill test/proficiency check

5 Skill test for the issue of a PPL – aeroplanes:

Section 1 – Pre-flight Operations and Departure	
Use of checklist, airmanship, control of aeroplane by external visual reference, anti/de-icing procedures, etc. apply in all sections.	
a	Pre-flight documentation, NOTAM and weather briefing
b	Mass and balance and performance calculation
c	Aeroplane inspection and servicing
d	Engine starting and after starting procedures
e	Taxiing and aerodrome procedures, pre-take-off procedures
f	Take-off and after take-off checks
g	Aerodrome departure procedures
h	ATC compliance and R/T procedures
Section 2 – General Airwork	
a	ATC compliance and R/T procedures
b	Straight and level flight, with speed changes
c	Climbing: i. Best rate of climb; ii. Climbing turns iii. Levelling off
d	Medium (30° bank) turns
e	Steep (45° bank) turns (including recognition and recovery from a spiral dive)
f	Flight at critically low air speed with and without flaps
g	Stalling: i. Clean stall and recover with power; ii. Approach to stall descending turn with bank angle 20°, approach configuration; iii. Approach to stall in landing configuration.
h	Descending: i. With and without power; ii. Descending turns (steep gliding turns); iii. Levelling off.
Section 3 – En-route Procedures	
a	Flight plan, dead reckoning and map reading
b	Maintenance of altitude, heading and speed
c	Orientation, timing and revision of ETAs and log keeping
d	Diversion to alternate aerodrome (planning and implementation)
e	Use of radio navigation aids
f	Basic instrument flying check (180° turn in simulated IMC)
g	Flight management (checks, fuel systems and carburettor icing, etc.)
h	ATC compliance and R/T procedures
Section 4 – Approach and Landing Procedures	
a	Aerodrome arrival procedures
b	*Precision landing (short field landing), crosswind, if suitable conditions are available
c	*Flapless landing
d	*Approach to landing with idle power (SE only)
e	Touch and go
f	Go-around from low height
g	ATC compliance and R/T procedures
h	Actions after flight
Section 5 – Abnormal and Emergency Procedures	
This section may be combined with sections 1 through 4	

a	Simulated engine failure after take-off (SE only)
b	*Simulated forced landing (SE only)
c	Simulated precautionary landing (SE only)
d	Simulated emergencies
e	Oral questions
Section 6 – Simulated Asymmetric Flight and Relevant Class or Type Items	
This section may be combined with sections 1 through 5	
a	Simulated engine failure during take-off (at a safe altitude unless carried out in an FFS)
b	Asymmetric approach and go-around
c	Asymmetric approach and full stop landing
d	Engine shutdown and restart
e	ATC compliance, R/T procedures or airmanship
f	As determined by the DFE: any relevant items of the class or type rating skill test to include, if applicable: i. Aeroplane systems including handling of auto pilot; ii. Operation of pressurisation system; iii. Use of de-icing and anti-icing system.
g	Oral questions

**These items may be combined, at the discretion of the DFE*

6 Skill test for the issue of a CPL – aeroplanes:

Section 1 — Pre-Flight Operations and Departure	
a	Pre-flight, including: Flight planning, Documentation, Mass and balance determination, Weather brief, NOTAMS
b	Aeroplane inspection and servicing
c	Taxiing and take-off
d	Performance considerations and trim
e	Aerodrome and traffic pattern operations
f	Departure procedure, altimeter setting, collision avoidance (lookout)
g	ATC liaison – compliance, R/T procedures
Section 2 General Airwork	
a	Control of the aeroplane by external visual reference, including straight and level, climb, descent, lookout
b	Flight at critically low airspeeds including recognition of and recovery from incipient and full stalls
c	Turns, including turns in landing configuration. Steep turns 45°
d	Flight at critically high airspeeds, including recognition of and recovery from spiral dives
e	Flight by reference solely to instruments, including: (i) level flight, cruise configuration, control of heading, altitude and airspeed (ii) climbing and descending turns with 10°–30° bank (iii) recoveries from unusual attitudes (iv) limited panel instruments
f	ATC liaison – compliance, R/T procedures

Section 3 — En-Route Procedures	
a	Control of aeroplane by external visual reference, including cruise configuration Range/Endurance considerations
b	Orientation, map reading
c	Altitude, speed, heading control, lookout
d	Altimeter setting. ATC liaison – compliance, R/T procedures
e	Monitoring of flight progress, flight log, fuel usage, assessment of track error and re- establishment of correct tracking
f	Observation of weather conditions, assessment of trends, diversion planning
g	Tracking, positioning (NDB or VOR), identification of facilities (instrument flight). Implementation of diversion plan to alternate aerodrome (visual flight)
Section 4 — Approach And Landing Procedures	
a	Arrival procedures, altimeter setting, checks, lookout
b	ATC liaison - compliance, R/T procedures
c	Go-around action from low height
d	Normal landing, crosswind landing (if suitable conditions)
e	Short field landing
f	Approach and landing with idle power (single-engine only)
g	Landing without use of flaps
h	Post flight actions
Section 5 — Abnormal And Emergency Procedures	
This section may be combined with sections 1 through 4	
a	Simulated engine failure after take-off (at a safe altitude), fire drill
b	Equipment malfunctions including alternative landing gear extension, electrical and brake failure
c	Forced landing (simulated)
d	ATC liaison - compliance, R/T procedures
e	Oral questions
Section 6 — Simulated Asymmetric Flight And Relevant Class Or Type Items	
This section may be combined with sections 1 through 5	
a	Simulated engine failure during take-off (at a safe altitude unless carried out in an FFS)
b	Asymmetric approach and go-around
c	Asymmetric approach and full stop landing
d	Engine shutdown and restart
e	ATC liaison – compliance, R/T procedures, Airmanship
f	As determined by the FE — any relevant items of the class or type rating skill test to include, if applicable: (i) aeroplane systems including handling of autopilot (ii) operation of pressurisation system (iii) use of de-icing and anti-icing system
g	Oral questions

7 IR skill test – aeroplanes:

7.1 Decision height/altitudes, minimum descent heights/altitudes and missed approach point shall be determined by the applicant and agreed by the examiner.

Section 1 — Pre-Flight Operations And Departure Use of checklist, airmanship, anti-icing/de-icing procedures, etc., apply in all sections	
a	Use of flight manual (or equivalent) especially a/c performance calculation, mass and balance
b	Use of Air Traffic Services document, weather document
c	Preparation of ATC flight plan, IFR flight plan/log
d	Identification of the required navaids for departure, arrival and approach procedures
e	Pre-flight inspection
f	Weather Minima
g	Taxiing
h	PBN departure (if applicable): — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the departure chart.
i	Pre-take-off briefing, Take-off
j(º)	Transition to instrument flight
k(º)	Instrument departure procedures, including PBN departures, and altimeter setting
l(º)	ATC liaison — compliance, R/T procedures
Section 2 — General Handling (º)	
a	Control of the aeroplane by reference solely to instruments, including: level flight at various speeds, trim
b	Climbing and descending turns with sustained Rate 1 turn
c	Recoveries from unusual attitudes, including sustained 45° bank turns and steep descending turns
d(*)	Recovery from approach to stall in level flight, climbing/ descending turns and in landing configuration — only applicable to aeroplanes
e	Limited panel: stabilised climb or descent, level turns at Rate 1 onto given headings, recovery from unusual attitudes — only applicable to aeroplanes
Section 3 — En-Route Ifr Procedures (º)	
a	Tracking, including interception, e.g. NDB, VOR, or track between waypoints
b	Use of navigation system and radio aids
c	Level flight, control of heading, altitude and airspeed, power setting, trim technique
d	Altimeter settings
e	Timing and revision of ETAs (en-route hold, if required)
f	Monitoring of flight progress, flight log, fuel usage, systems' management
g	Ice protection procedures, simulated if necessary
h	ATC liaison — compliance, R/T procedures
Section 3a — Arrival Procedures	
a	Setting and checking of navigational aids, if applicable
b	Arrival procedures, altimeter checks
c	Altitude and speed constraints, if applicable

d	PBN arrival (if applicable): — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the arrival chart.
Section 4(°) — 3D Operations(++)	
a	Setting and checking of navigational aids Check Vertical Path angle For RNP APCH: — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the approach chart.
b	Approach and landing briefing, including descent/approach/landing checks, including identification of facilities
c(+)	Holding procedure
d	Compliance with published approach procedure
e	Approach timing
f	Altitude, speed heading control (stabilised approach)
g(+)	Go-around action
h(+)	Missed approach procedure/landing
i	ATC liaison — compliance, R/T procedures
Section 5(°) – 2D Operations(++)	
a	Setting and checking of navigational aids For RNP APCH: — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the approach chart.
b	Approach and landing briefing, including descent/approach/landing checks, including identification of facilities
c(+)	Holding procedure
d	Compliance with published approach procedure
e	Approach timing
f	Altitude/Distance to MAPT, speed, heading control (stabilised approach), Step Down Fixes (SDF(s)), if applicable
g(+)	Go-around action
h(+)	Missed approach procedure/landing
i(+)	ATC liaison — compliance, R/T procedures
Section 6 — Flight With One Engine Inoperative (multi- engine aeroplanes only) (º)	
a	Simulated engine failure after take-off or on go-around
b	Approach, go-around and procedural missed approach with one engine inoperative
c	Approach and landing with one engine inoperative
d	ATC liaison — compliance, R/T procedures

(°) Must be performed by sole reference to instruments.

(*) May be performed in an FFS, FTD 2/3 or FNPT II.

(+) May be performed in either Section 5 or Section 6.

(++) To establish or maintain PBN privileges one approach in either Section 4 or Section 5 shall be an RNP APCH. Where an RNP APCH is not practicable, it shall be performed in an appropriately equipped FSTD.

8 Single-pilot aeroplanes, except for high performance complex aeroplanes:

D: TEST/TRAINING ITEM		*Instructors signature and date when training is completed*		*Examiner to tick in the appropriate box and signature and date at the end of each section*			
Section 1. Departure		**FSTD**	**Aircraft**	**Mandatory Items**	**PASS**	**FAIL**	**N/A**
1.1	Pre-flight including: Documentation Mass and Balance, Weather briefing, and NOTAM						
1.2	Pre-start checks						
1.2.1	External						
1.2.2	Internal			**M**			
1.3	Engine starting: Normal and malfunctions			**M**			
1.4	Taxiing			**M**			
1.5	Pre-departure checks: Engine run-up (if applicable)			**M**			
1.6	Take-off procedure: Normal with Flight Manual flap settings Crosswind (if conditions available)			**M**			
1.7	Climbing: Vx/Vy, Turns onto Headings, and Level Off			**M**			
1.8	ATC liaison – Compliance, R/T procedure						
Examiner Signature & Date:							
Section 2. Airwork (VMC)							
2.1	Straight and level flight at various airspeeds including flight at critically low airspeed with and without flaps (including approach to VMCA when applicable)						
2.2	Steep turns (360° left and right at 45° bank)			**M**			
2.3	Stalls and recovery: (i) Clean stall (ii) Approach to stall in descending turn with bank with approach configuration and power (iii) Approach to stall in landing configuration and power (iv) Approach to stall, climbing turn with take-off flap and climb power (single engine aeroplane only)			**M**			
2.4	Handling using autopilot and flight director (may be conducted in section 3) if applicable			**M**			
2.5	UPSET recovery aircraft with high nose attitude and low nose attitude						
2.6	ATC liaison – Compliance, R/T procedure						
Examiner Signature & Date:							
Section 3A. En-route Procedures (VFR)							
3A.1	Flight plan, dead reckoning and map reading						
3A.2	Maintenance of altitude, heading and speed						
3A.3	Orientation, timing and revision of ETAs						
3A.4	Use of radio navigation aids (if applicable)						
3A.5	Flight management (flight log, routine checks including fuel, systems and icing)						
3A.6	ATC liaison – Compliance, R/T procedures						

Section 3B. Instrument Flight (IFR		FSTD	Aircraft	Mandatory Items	PASS	FAIL	N/A
3B.1*	Departure IFR			**M**			
3B.2*	En-route IFR			**M**			
3B.3*	Holding procedures			**M**			
3B.4*	3D operations to DH/A of 200□ (60 m) or to higher minima if required by the approach procedure (autopilot may be used to glideslope intercept)			**M**			
3B.5*	2D operations to MDH/A			**M**			
3B.6*	Flight exercises including simulated failure of the compass and attitude indicator: Rate 1 turns, recoveries from unusual attitudes			**M**			
3B.7*	Failure of localiser or glideslope						
3B.8*	ATC liaison – Compliance, R/T procedure						
Examiner Signature & Date:							
Section 4. Arrival and Landing							
4.1	Aerodrome arrival procedure			**M**			
4.2	Normal landing			**M**			
4.3	Flapless landing			**M**			
4.4	Crosswind landing (if suitable conditions)						
4.5	Approach and landing with idle power from up to 2000' above the runway (single-engine aeroplane only)						
4.6	Go-around from minimum height			**M**			
4.7	Night go-around and landing (if applicable)						
4.8	ATC liaison – Compliance, R/T procedure						
Examiner Signature & Date:							
Section 5. Abnormal and Emergency Procedures (This section can be combined with sections 1 through 4)							
5.1	Rejected take-off at a reasonable speed			**M**			
5.2	Simulated engine failure after take-off (single-engine aeroplanes only)			**M**			
5.3	Simulated forced landing without power (single-engine aeroplanes only)			**M**			
5.4	Simulated emergencies: (i) fire or smoke in flight, (ii) systems' malfunctions as appropriate						
5.5	Engine shutdown and restart (ME skill test only) (at a safe altitude if performed in the aircraft)						
5.6	ATC liaison – Compliance, R/T procedure						
Examiner Signature & Date:							
Section 6. Simulated Asymmetric Flight (This section can be combined with sections 1 through 5)							
6.1*	Simulated engine failure during take-off (at a safe altitude unless carried out in FFS or FNPT II)			**M**			
6.2*	Asymmetric approach and go-around			**M**			
6.3*	Asymmetric approach and full stop landing			**M**			
6.4	ATC liaison – Compliance, R/T procedure						
Examiner Signature & Date:							

9 Multi-crew operations aeroplanes and single-pilot high performance complex aeroplanes:

E: TEST / TRAINING ITEM		*Instructors signature and date when training completed*		*Examiner to tick in the appropriate box and signature and date at the end of each section*			
Section 1. Pre-flight Preparation and Checks		**FSTD**	**Aircraft**	**Mandatory Items**	**PASS**	**FAIL**	**N/A**
1.1	Performance calculation						
1.2	Aeroplane external visual inspection; location of each item and purpose of inspection						
1.3	Cockpit inspection						
1.4	Use of checklist prior to starting engines, starting procedures, radio and navigation equipment check, selection and setting of navigation and communication frequencies			**M**			
1.5	Taxiing in compliance with air traffic control, or instructions of instructor						
1.6	Before take-off checks			**M**			
Examiner Signature & Date:							
Section 2. Take-Off							
2.1	Normal take off with different flap settings, including expedited take-off						
2.2*	Instrument take-off; transition to instrument flight is required during rotation or immediately after becoming airborne						
2.3	Crosswind take-off (aeroplane if practicable)						
2.4	Take-off at maximum take-off mass (actual or simulated maximum take-off mass)						
2.5	**Take-off with simulated engine failure**	In aeroplanes which are not certificated as CAT category aeroplanes, the engine failure shall not be simulated until reaching a minimum height of 500 feet above runway end. In aeroplanes having the same performance as a CAT category aeroplane regarding take-off mass and density altitude, the instructor may simulate the engine failure shortly after reaching V2					
2.5.1*	Shortly after reaching V2			**M** (A)			
2.5.2*	Or Between V1 and V2 **(FFS ONLY)**			**M** (FSTD)			
2.5.3*	Or as close as possible after V1, when V1 and V2 or V1 and VR are identical						
2.6	Rejected take-off at a reasonable speed before reaching V1			**M**			
Examiner Signature & Date:							
Section 3. Flight Manoeuvres and Procedures							
3.1	Turns with and without spoilers						
3.2	Tuck under and Mach buffets after reaching the critical Mach number, and other specific flight characteristics of the aeroplane (e.g. Dutch Roll)						
3.3	Normal operation of the systems and controls engineer's panel						
3.4	**Normal and abnormal operations of following system**	A **mandatory minimum of 3 items** (in abnormal) shall be selected from 3.4.1 to 3.4.15 inclusive for skill test (M)					
3.4.1	Engine (if necessary, propeller)						
3.4.2	Pressurisation and air-conditioning						
3.4.3	Pitot / static system						
3.4.4	Fuel system						

		FSTD	Aircraft	Mandatory Items	PASS	FAIL	N/A
3.4.5	Electrical system						
3.4.6	Hydraulic system						
3.4.7	Flight Control and Trim-system						
3.4.8	Anti-icing / de-icing system, glare shield heating						
3.4.9	Autopilot / Flight director						
3.4.10	Stall warning devices or stall avoidance devises, and stability augmentation devices						
3.4.11	Ground proximity warning system, weather radar, radio altimeter, transponder						
3.4.12	Radios, navigation equipment, instruments, flight management system						
3.4.13	Landing gear and brake						
3.4.14	Slats and flap system						
3.4.15	Auxiliary power unit						
3.5	**Abnormal and emergency procedures:**	A **mandatory minimum of 3 items** shall be selected from 3.5.1 to 3.5.9 inclusive for skill test (M)					
3.5.1	Fire drills e.g. engine, APU, cabin, cargo compartment, flight deck, wing and electrical fires including evacuation.						
3.5.2	Smoke control and removal						
3.5.3	Engine failures, shutdown or restart at a safe height						
3.5.4	Fuel dumping (simulated) (if applicable)						
3.5.5	Wind shear at take-off / landing **(FFS ONLY)**			**M** (FSTD)			
3.5.6	Simulated cabin pressure failure / emergency descent						
3.5.7	Incapacitation of flight crew member						
3.5.8	Other emergency procedures as outlined in the appropriate Aeroplane Operating Manual (AOM) :						
3.5.8.1							
3.5.8.2							
3.5.8.3							
3.5.9	ACAS/TCAS/GPWS event (**FFS ONLY**)			**M** (FSTD)			
3.6	**Pilot General Flying Skill**						
3.6.1	Steep turns with 45° bank, 180° to 360 ° left and right						
3.6.2	Early recognition and counter measures on approaching stall (up to activation of stall warning device) in take-off configuration (flaps in take-off position), in cruising flight configuration and in landing configuration (flaps in landing position, gear extended)						
3.6.3	Recovery from full stall or after activation of stall warning device in climb, cruise and approach configuration						
3.6.4	Recovery from UPSET situation with aircraft nose high attitude and aircraft nose low attitude **below** 25,000 feet						
3.6.5	Recovery from UPSET situation with aircraft nose high attitude and aircraft nose low attitude **above** 25,000 feet						
3.7	**Instrument Flight Procedures**						
3.7.1*	Adherence to departure and arrival routes and ATC instructions			**M**			
3.7.2*	Holding procedures						

		FSTD	Aircraft	Mandatory Items	PASS	FAIL	N/A
3.7.3	**3D operations down to a decision height (DH) not less than 200 feet (60 m)**						
3.7.3.1*	Manually, without flight director			**M**			
3.7.3.2*	Manually, with flight director						
3.7.3.3*	With autopilot						
3.7.3.4*	Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach before passing the Outer Marker (OM) / 1000 feet AAL until touchdown or through the complete missed approach procedure. In aeroplanes which are not certificated as CAT aeroplanes, the approach with simulated engine failure and the ensuing go-around shall be initiated in conjunction with the 2D operations as described in 3.7.4. The go-around shall be initiated when reaching the published obstacle clearance height (OCH/A), however not later than reaching a minimum descent height/altitude (MDH/A) of 500 feet above runway threshold elevation. In aeroplanes having the same performance as a CAT category aeroplane regarding take-off mass and density altitude, the instructor may simulate the engine failure in accordance with 3.7.3.4.			**M**			
3.7.4*	2D Operations down to the MDH/A			**M**			
3.7.5*	Circling approach under the following conditions: (a) approach to the authorised minimum circling approach altitude at the aerodrome in question in accordance with the local instrument approach facilities in simulated instrument flight conditions followed by: (b) circling approach to another runway at least 90° off centreline from final approach used in item (a), at the authorised minimum circling approach altitude; *Remark: if (a) and (b) are not possible due to ATC reasons a simulated low visibility pattern may be performed*						
Examiner Signature & Date:							
Section 4. Missed Approach Procedure							
4.1*	Go-around with all engines operating during a 3D operation on reaching decision height						
4.2	Other missed approach procedures						
4.3*	Manually go-around with the critical engine simulated inoperative after an instrument approach on reaching DH, MDH or MAPt			**M**			
4.4	Rejected landing at 50 feet (15 m) above runway threshold and go-around						
Examiner Signature & Date:							
Section 5. Landings							
5.1	Normal landing* with visual reference establish when reaching DA/H following an instrument approach operation						
5.2	Landing with simulated jammed horizontal stabiliser in any out-of-trim position						
5.3	Crosswind landing (aeroplane if practicable)						
5.4	Traffic pattern and landing without extended or with partly extended flaps and slats						
5.5	Landing with critical engine simulated inoperative			**M**			
5.6	Landing with two engines inoperative: - Aeroplanes with 3 engines: the centre engine and 1 outboard engine as far as practicable according to data of the AOM. - Aeroplanes with four engines: 2 engines on one side			**M** (FSTD)			
Examiner Signature & Date:							

Section 6. Special requirement for extension of a type rating for instrument approaches down to a decision height of less than 200 feet (60m), i.e. CAT II/III Operations		FSTD	Aircraft	Mandatory Items	PASS	FAIL	N/A
Additional authorisation on a type rating for instrument approaches down to a decision height of less than 200 feet (60m) (CAT II/III). The following manoeuvres and procedures are the minimum training requirements to permit instrument approaches down to a DH of less than 200 feet (60m). During the following instrument approaches and missed approach procedures all aeroplane equipment required for type certification of instrument approaches down to a DH of less than 200 feet (60m) shall be used.							
6.1*	Rejected take-off at minimum authorised RVR			**M**			
6.2*	CAT II/III approaches: in simulated instrument flight conditions down to the applicable DH, using flight guidance system. Standard procedures of crew coordination (task sharing, call out procedures, mutual surveillance, information exchange and support) shall be observed			**M**			
6.3*	Go-around: after approaches as indicated in 6.2 on reaching DH. The training also shall include a go-around due to (simulated) insufficient RVR, wind shear, aeroplane deviation in excess of approach limits for a successful approach, and ground/airborne equipment failure prior to reaching DH and, go-around with simulated airborne equipment failure. Special attention shall be given to go-around procedures with pre-calculated manual or automatic go-around attitude guidance.			**M**			
6.4*	Landing(s): with visual reference established at DH following an instrument approach. Depending on the specific flight guidance system, an automatic landing shall be performed.			**M**			
Note: CAT II/III operations shall be accomplished in accordance with the applicable air operations requirements							
Examiner Signature & Date:							
Section 7. Endorsement							
Section 7A. Endorsement – By Day in Aircraft in Flight							
7A.1	Normal take-off and climb to circuit height						
7A.2	Visual circuit, approach without visual or radio glideslope guidance, auto-thrust system disengage, and go-around not below 100 ft AGL.						
7A.3	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes.						
Section 7B. Endorsement – In FFS (ZFTT)							
7B.1	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes in overweight condition.						
7B.2	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes in normal condition.						
7B.3	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes with crosswind.						
7B.4	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes at night.						
7B.5	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes on short runway.						
7B.6	Visual circuit, approach with visual or radio glideslope guidance, auto-thrust system in operation, and full stop landing using reverse thrust and wheel brakes on wet/contaminated runway.						
Examiner Signature & Date:							

C. Specific requirements for the helicopter category

Pass Marks

1. In case of skill test or proficiency check for type ratings and the ATPL the applicant shall pass sections 1 to 4 and 6 (as applicable) of the skill test or proficiency check. Failure in more than five items will require the applicant to take the entire test or check again. An applicant failing not more than five items shall be classified as partial pass, and will require a re-test or re-check on the failed section again. Failure in any item of the re-test or re- check or failure in any other items already passed will require the applicant to take the entire test or check again. All sections of the skill test or proficiency check shall be completed within 6 months.

2. In case of proficiency check for an IR the applicant shall pass section 5 of the proficiency check. Failure in more than three items will require the applicant to take the entire section 5 again. An applicant failing not more than three items shall be classified as partial pass, and will require a re-check on the failed items again. Failure in any item of the re-check or failure in any other items of section 5 already passed will require the applicant to take the entire check again.

3. In case of skill test or proficiency check for PPL, CPL and IR skill test, the applicant shall pass all the relevant sections of the skill test or proficiency check. If any item in a section is failed, that section is failed. Failure in more than one section will require the applicant to take the entire test or check again. Any applicant failing only one section shall be classified as partial pass, and will require a re-test or re-check on the failed section again. Failure in any section of the re-test or re- check following a partial pass, including those sections that have been passed at a previous attempt will require the applicant to take the entire test or check again. For single-pilot multi-engine aeroplanes, section 6 of the relevant test or check, addressing asymmetric flight, shall be passed.

Flight Test Tolerance

3. The applicant shall demonstrate the ability to:

   (a) operate the aeroplane 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 aeroplane at all times in such a manner that the successful outcome of a procedure or manoeuvre is always assured;

   (f) understand and apply crew coordination and incapacitation procedures, if applicable; and

   (g) communicate effectively with the other crew members, if applicable.

4. The following limits shall apply, corrected to make allowance for turbulent conditions and the handling qualities and performance of the aeroplane used:

Helicopter Tolerances

Profile	PPL Skill Tests	CPL Skill Test	IR Skill Test & all other Rating Issues and Renewals
Altitude or height			
Normal Flight	± 150 ft	± 100 ft	± 100 ft
With simulated major emergency	± 200 ft	± 150 ft	± 100 ft
Hovering IGE	± 2 ft	± 2 ft	± 2 ft
Limited or partial panel		± 200 ft	± 200 ft
Starting go-around at decision alt/ht			+ 50 ft / - 0 ft
Minimum descent altitude / height			+ 50 ft / - 0 ft
'Not below' minima (from FAF altitude down to MDA/H)			*- 0 ft*
Circling minima			*+ 100 ft / - 0 ft*
Tracking			
At all times when using a single-needle display	± 10°	± 10°	± 5°
At all times when using a deviation bar display	Full Scale Deflection	Full Scale Deflection	Half Scale Deflection Azimuth and Flight Path (Precision Approach)
DME arcing			± 1 nm
Heading			
Normal flight	± 10°	± 10°	± 5°
With simulated major emergency	± 15°	± 15°	± 10°
Limited or Partial panel		*± 15°*	*± 15°*
Speed			
Take-off and approach	+ 15 / - 10 kt		
Take-off and approach multi-engine		± 5 kt	± 5 kt
All other flight regimes	± 15 kt	± 10 kt	± 10 kt
Limited or Partial Panel			*± 10 kt*
With simulated engine failure			+ 10 / - 5 kt
Ground drift			
TO hover IGE	± 3 kt	± 3 ft	± 3 ft
Landing	No sideways or backwards movement		± 2 ft 0 ft rearward or lateral flight

- Entries in italics are suggested tolerances.
- Where a test is flown for more than one purpose, i.e. licence issue and class rating issue, examiners should be mindful of the less stringent tolerances shown above.

Content of the training/skill test/proficiency check

5 Skill test for the issue of a PPL – helicopters

Section 1 – Pre-flight Operations and Departure	
Use of checklist, airmanship, control of aeroplane by external visual reference, anti/de-icing procedures, etc. apply in all sections.	
a	Helicopter knowledge, (for example technical log, fuel, mass and balance, performance), flight planning, NOTAM and weather briefing
b	Pre-flight inspection or action, location of parts and purpose
c	Cockpit inspection and starting procedure
d	Communication and navigation equipment checks, selecting and setting frequencies
e	Pre-take-off procedure, R/T procedure and ATC compliance
f	Parking, shutdown and post-flight procedure
Section 2 – Hover Manoeuvres, Advance Handling and Confined Areas	
a	Take-off and landing (lift-off and touch down)
b	Taxi and hover taxi
c	Stationary hover with head, cross or tail wind
d	Stationary hover turns, 360° left and right (spot turns)
e	Forward, sideways and backwards hover manoeuvring
f	Simulated engine failure from the hover
g	Quick stops into and downwind
h	Sloping ground or unprepared sites landings and take-offs
i	Take-offs (various profiles)
j	Crosswind and downwind take-off (if practicable)
k	Take-off at maximum take-off mass (actual or simulated)
l	Approaches (various profiles)
m	Limited power take-off and landing
n	Autorotations, (DFE to select two items: basic. range, low speed and 360° turns)
o	Autorotative landing
p	Practice forced landing with power recovery
q	Power checks, reconnaissance technique, approach and departure technique
Section 3 – Navigation - En-route Procedures	
a	Navigation and orientation at various altitudes or heights and map reading
b	Altitude or height, speed, heading control, observation of airspace and altimeter setting
c	Monitoring of flight progress, flight log, fuel usage, endurance, ETA, assessment of track error and re-establishment of correct track and instrument monitoring
d	Observation of weather conditions and diversion planning
e	Use of navigation aids (where available)
f	ATC liaison with due observance of regulations, etc.
Section 4 – Flight Procedures and Manoeuvres	
a	Level flight, control of heading, altitude or height and speed
b	Climbing and descending turns to specified headings
c	Level turns with up to 30° bank, 180° to 360° left or right
d	Level turns 180° left and right by sole reference to instruments
Section 5 – Abnormal and Emergency Procedures (Simulated Where Appropriate)	
Note (1) Where the test is conducted on an ME helicopter, a simulated engine failure drill, including an SE approach and landing should be included in the test.	
Note (2) The DFE should select four items from the following:	
a	Engine malfunctinos, including governor failure, carburettor or engine icing and oil system, as appropriate
b	Fuel system malfunction

c	Electrical system malfunction
d	Hydraulic system malfunction, including approach and landing without hydraulics, as applicable
e	Main rotor or anti-torque system malfunction (FFS or discussion only)
f	Fire drilles, including smoke control and removal, as applicable
g	Other abnormal and emergency procedures as outlined in an appropriate flight manual and with reference to xxx, including for multi-engine helicopters: a) Simulated engine failure at take-off: i. Rejected take-off at or before take-off decision point (TDP) or safe forced landing at or before a defined point after take-off (DPATO); ii. Shortly after TDP or DPATO. b) Landing with simulated engine failure: i. Landing or go-around following engine; ii. Following engine failure after landing decision point (LDP) or safe forced landing after a define point before landing (DPBL).

6 Skill test for the issue of a CPL – helicopters

6.1 Items in section 4 may be performed in a helicopter FNPT or a helicopter FFS. Use of a helicopter checklists,, airmanship, control of helicopter by external visual reference, anti-icing procedures, and principles of threat and error management apply in all sections.

Section 1 — Pre-Flight/Post-Flight Checks And Procedures	
a	Helicopter knowledge (e.g. technical log, fuel, mass and balance, performance), flight planning, documentation, NOTAMS, weather
b	Pre-flight inspection/action, location of parts and purpose
c	Cockpit inspection, starting procedure
d	Communication and navigation equipment checks, selecting and setting frequencies
e	Pre-take-off procedure, R/T procedure, ATC liaison-compliance
f	Parking, shutdown and post-flight procedure
Section 2 — Hover manoeuvres, advanced handling and confined areas	
a	Take-off and landing (lift-off and touchdown)
b	Taxi, hover taxi
c	Stationary hover with head/cross/tail wind
d	Stationary hover turns, 360° left and right (spot turns)
e	Forward, sideways and backwards hover manoeuvring
f	Simulated engine failure from the hover
g	Quick stops into and downwind
h	Sloping ground/unprepared sites landings and take-offs
i	Take-offs (various profiles)
j	Crosswind, downwind take-off (if practicable)
k	Take-off at maximum take-off mass (actual or simulated)
l	Approaches (various profiles)
m	Limited power take-off and landing
n	Autorotations (FE to select two items from — Basic, range, low speed, and 360° turns)
o	Autorotative landing

p	Practice forced landing with power recovery
q	Power checks, reconnaissance technique, approach and departure technique
Section 3 — Navigation — En-Route Procedures	
a	Navigation and orientation at various altitudes/heights, map reading
b	Altitude/height, speed, heading control, observation of airspace, altimeter setting
c	Monitoring of flight progress, flight log, fuel usage, endurance, ETA, assessment of track error and re-establishment of correct track, instrument monitoring
d	Observation of weather conditions, diversion planning
e	Tracking, positioning (NDB and/or VOR), identification of facilities
f	ATC liaison and observance of regulations, etc.
Section 4 — Flight Procedures and Manoeuvres by Sole Reference To Instruments	
a	Level flight, control of heading, altitude/height and speed
b	Rate 1 level turns onto specified headings, 180°to 360°left and right
c	Climbing and descending, including turns at rate 1 onto specified headings
d	Recovery from unusual attitudes
e	Turns with 30° bank, turning up to 90° left and right
Section 5 — Abnormal and Emergency procedures (simulated where appropriate)	
Note (1): Where the test is conducted on a multi-engine helicopter a simulated engine failure drill, including a single-engine approach and landing, shall be included in the test.	
Note (2): The DFE shall select 4 items from the following:	
a	Engine malfunctions, including governor failure, carburettor/engine icing, oil system, as appropriate
b	Fuel system malfunction
c	Electrical system malfunction
d	Hydraulic system malfunction, including approach and landing without hydraulics, as applicable
e	Main rotor and/or anti-torque system malfunction (FFS or discussion only)
f	Fire drills, including smoke control and removal, as applicable
g	Other abnormal and emergency procedures as outlined in appropriate flight manual, including for multi-engine helicopters: Simulated engine failure at take-off: rejected take-off at or before TDP or safe forced landing at or before DPATO, shortly after TDP or DPATO. Landing with simulated engine failure: landing or go-around following engine failure before LDP or DPBL, following engine failure after LDP or safe forced landing after DPBL.

7 IR skill test – helicopters

7.1 Decision heights/altitude, minimum descent heights/altitudes and missed approach point shall be determined by the applicant and agreed by the examiner.

Section 1 — Departure Use of checklist, airmanship, anti-icing/de-icing procedures, etc., apply in all sections	
a	Use of flight manual (or equivalent) especially aircraft performance calculation; mass and balance
b	Use of Air Traffic Services document, weather document
c	Preparation of ATC flight plan, IFR flight plan/log
d	Identification of the required navaids for departure, arrival and approach procedures
e	Pre-flight inspection
f	Weather minima
g	Taxiing/Air taxy in compliance with ATC or instructions of instructor
h	PBN departure (if applicable): — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the departure chart.
j	Pre-take-off briefing, procedures and checks
k	Transition to instrument flight
i	Instrument departure procedures, including PBN procedures
Section 2 — General Handling	
a	Control of the helicopter by reference solely to instruments, including:
b	Climbing and descending turns with sustained Rate 1 turn
c	Recoveries from unusual attitudes, including sustained 30° bank turns and steep descending turns
Section 3 — En-Route Ifr Procedures	
a	Tracking, including interception, e.g. NDB, VOR, RNAV
b	Use of radio aids
c	Level flight, control of heading, altitude and airspeed, power setting
d	Altimeter settings
e	Timing and revision of ETAs
f	Monitoring of flight progress, flight log, fuel usage, systems management
g	Ice protection procedures, simulated if necessary and if applicable
h	ATC liaison — compliance, R/T procedures
Section 3a — Arrival Procedures	
a	Setting and checking of navigational aids, if applicable
b	Arrival procedures, altimeter checks
c	Altitude and speed constraints, if applicable
d	PBN arrival (if applicable) — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the arrival chart.
Section 4 — 3D Operations(+)	

a	Setting and checking of navigational aids Check Vertical Path angle For RNP APCH: (a) Check that the correct procedure has been loaded in the navigation system; and (b) Cross-check between the navigation system display and the approach chart.
b	Approach and landing briefing, including descent/approach/landing checks
c(*)	Holding procedure
d	Compliance with published approach procedure
e	Approach timing
f	Altitude, speed, heading control (stabilised approach)
g(*)	Go-around action
h(*)	Missed approach procedure/landing
i	ATC liaison — compliance, R/T procedures
Section 5 — 2D Operations(+)	
a	Setting and checking of navigational aids For RNP APCH: — Check that the correct procedure has been loaded in the navigation system; and — Cross-check between the navigation system display and the approach chart.
b	Approach and landing briefing, including descent/approach/landing checks and identification of facilities
c(*)	Holding procedure
d	Compliance with published approach procedure
e	Approach timing
f	Altitude, speed, heading control (stabilised approach)
g(*)	Go-around action
h(*)	Missed approach procedure (*)/landing
i	ATC liaison — compliance, R/T procedures
Section 6 — Abnormal And Emergency Procedures This section may be combined with sections 1 through 5. The test shall have regard to control of the helicopter, identification of the failed engine, immediate actions (touch drills), follow-up actions and checks and flying accuracy, in the following situations:	
a	Simulated engine failure after take-off and on/during approach (**) (at a safe altitude unless carried out in an FFS or FNPT II/III, FTD 2,3)
b	Failure of stability augmentation devices/hydraulic system (if applicable)
c	Limited panel
d	Autorotation and recovery to a pre-set altitude
e	Precision approach manually without flight director (***) Precision approach manually with flight director (***)

(+) To establish or maintain PBN privileges one approach in either Section 4 or Section 5 shall be an RNP APCH. Where an RNP APCH is not practicable, it shall be performed in an appropriately equipped FSTD

(*) To be performed in Section 4 or Section 5. (**) Multi-engine helicopter only.

(***) Only one item to be tested

8 Single pilot and multi-pilot helicopters

8.1 Applicants for the skill test for the issue of the multi-pilot helicopter type rating and ATPL(H) shall pass only Sections 1 to 4 and, if applicable, Section 6.

8.2 Applicants for the renewal of the multi-pilot helicopter type rating proficiency check shall pass only Sections 1 to 4 and, if applicable, Section 6.

E: TEST / TRAINING ITEM		Instructors signature and date when training completed		Examiner to tick in the appropriate box and signature and date at the end of each section			
Section 1. Pre-flight Preparation and Checks		**FSTD**	**Aircraft**	**Mandatory Items**	**PASS**	**FAIL**	**N/A**
1.1	Helicopter knowledge (e.g. technical log, fuel, mass and balance, performance), flight planning, documentation, NOTAMS, weather			**M**			
1.2	Pre-flight inspection/action, location of parts and purpose			**M**			
1.3	Cockpit inspection			**M**			
1.4	Starting procedures, radio and navigation equipment checks, selection and setting of navigation and communication frequencies			**M**			
1.5	Taxiing/ air taxiing in compliance with air traffic control instructions or with instructions of an instructor			**M**			
1.6	Pre-take-off procedure, ATC liaison-compliance, R/T procedure			**M**			
Examiner Signature & Date:							
Section 2. Flight Manoeuvres and Procedures							
2.1	Take-offs (various profiles)			**M**			
2.2	Sloping ground or crosswind take-off and landing						
2.3	Take-off at maximum take-off mass (actual or simulated maximum take-off mass)						
2.4	Take-off with simulated engine failure shortly before reaching TDP or DPATO (MEH only)			**M**			
2.4.1	Take-off with simulated engine failure shortly after reaching TDP or DPATO (MEH only)			**M**			
2.4.2	Take-off with simulated engine failure shortly before reaching EFATO (SEH only)						
2.4.3	Take-off with simulated engine failure shortly after reaching EFATO (SEH only)						
2.5	Climbing and descending turns to specified headings			**M**			
2.5.1	Turns with 30 bank, 180 to 360 left and right, by sole reference to instruments			**M**			
2.6	Autorotative descent			**M**			
2.6.1	Autorotative landing (SEH only) or power recovery (MEH only)			**M**			
2.7	Landings (various profiles)			**M**			
2.7.1	Go-around or landing following simulated engine failure before LDP or DPBL (MEH only)			**M**			
2.7.2	Landing following simulated engine failure after LDP or DPBL (MEH only)			**M**			
2.8	ATC liaison – Compliance, R/T procedures						
Examiner Signature & Date:							
Section 3. Normal and Abnormal Operations (a **mandatory minimum of 3 items** shall be selected from this section for skill test)							
3.1	Engine						
3.2	Air conditioning (heating, ventilation)						
3.3	Pitot / Static system						
3.4	Fuel system						
3.5	Electrical system						

3.6	Hydraulic system						
3.7	Flight control and Trim system						
		FSTD	**Aircraft**	**Mandatory Items**	**PASS**	**FAIL**	**N/A**
3.8	Anti-icing and de-icing system						
3.9	Autopilot / Flight director						
3.10	Stability augmentation devices						
3.11	Weather radar, radio altimeter, transponder						
3.12	Area Navigation System						
3.13	Landing gear system						
3.14	Auxiliary power unit						
3.15	Radio, navigation equipment, instrument flight management system						
Examiner Signature & Date:							
Section 4. Abnormal and Emergency (a **mandatory minimum of 3 items** shall be selected from this section for skill test)							
4.1	Fire drills (including evacuation if applicable)						
4.2	Smoke control and removal						
4.3	Engine failures, shutdown and restart at a safe height						
4.4	Fuel dumping (simulated)						
4.5	Tail rotor control failure (if applicable)						
4.5.1	Tail rotor loss (if applicable)						
4.6	Incapacitation of crew member – MPH only						
4.7	Transmission malfunctions						
4.8	Other emergencies procedures as outlined in the appropriate Aircraft Flight Manual (AFM)						
Examiner Signature & Date:							
Section 5. Instrument Flight Procedures (to be performed in IMC or simulated IMC)							
5.1*	Instrument take-off: transition to instrument flight is required as soon as possible after becoming airborne						
5.1.1*	Simulated engine failure during departure			**M**			
5.2*	Adherence to departure and arrival routes and ATC instruction			**M**			
5.3*	Holding procedures						
5.4*	3D operations to DH/A of 200 feet (60m) or to higher minima if required by the approach procedure						
5.4.1*	Manually, without flight director. Note: According to the AFM, RNP APCH procedures may require the use of autopilot or Flight Director. The procedure to be flown manually shall be chosen taken into account such limitation (example choose an ILS for 5.4.1 in case of such AFM limitation)			**M**			
5.4.2*	Manually, with Flight Director			**M**			
5.4.3*	With coupled autopilot						

5.4.4*	Manually, with one engine simulated inoperative; engine failure has to be simulated during final approach before passing 1000 feet above aerodrome level until touchdown or until completion of the missed approach procedure			**M**			
5.5*	2D operations down to the minimum descent altitude MDA/H			**M**			
		FSTD	**Aircraft**	**Mandatory Items**	**PASS**	**FAIL**	**N/A**
5.6*	Go-around with all engines operating on reaching DA/DH or MDA/MDH						
5.6.1	Other missed approach procedures						
5.6.2	Go-around with one engine simulated inoperative on reaching DA/DH or MDA/MDH			**M**			
5.7	IMC autorotation with power recovery			**M**			
5.8	Recovery from unusual attitudes			**M**			
Examiner Signature & Date:							
Section 6. Use of Special Equipment							
6	Use of special equipment						
Examiner Signature & Date:							

7.5 Appendix 5 - Qualified Military Pilot (QMP)

(Chapter 1, 1.4.2.1 refers)

Recognition of Military Qualification

1. The CAAM recognises all Malaysian QMP who have completed a course of military theoretical knowledge and flying training and have been awarded the pilot wing by one of the military services provided such QMP remain in active flying practise or in the case of holder with instructor rating, has lapsed a maximum of 60 months of active flying, they will not normally be required to attend a further course of approved flying training or to take the skill test for licence issue.

Requirements (Policy)

2. The licensing policy for former or serving QMP is based upon:
   a) the flying experience requirement set out in Table 1;
   b) the theoretical knowledge requirement in Table 2; and
   c) the applicable flying training requirement in paragraph 4 below.

   Note.- the requirements of 2(b) and 2(c) shall be completed at an ATO.

License	Medical	Age	Experience
ATPL-A	Class 1 Medical certificate without waiver	21-64	Not less than 1500 hours as pilot of aeroplane inclusive 700 hours PIC on military/ government aircraft
CPL(A)/IR	Class 1 Medical certificate without waiver	21-64	Not less than 1000 hours as pilot of aeroplane inclusive 500 hours PIC on military/ government aircraft
CPL(A)	Class 1 Medical certificate without waiver	21-64	Not less than 700 hours as pilot of aeroplane inclusive 300 hours PIC on military/ government aircraft
PPL (A)	Class 1 Medical certificate without waiver	21-64	Not less than 300 hours as pilot of aeroplane inclusive 60 hours PIC on military/ government aircraft
ATPL(H)/IR	Class 1 Medical certificate without waiver	21-64	Not less than 1000 hours as pilot of helicopter inclusive 500 hours PIC on military/ government aircraft. If IR is required, the applicant has accumulated 300 hours flying experience after gaining a military/ government instrument flying qualification.
CPL(H)	Class 1 Medical certificate without waiver	21-64	Not less than 700 hours as pilot of helicopter inclusive 300 hours PIC on military/ government aircraft
PPL (H)	Class 1 Medical certificate	21-64	Not less than 300 hours as pilot of helicopter inclusive 60 hours PIC on military/ government aircraft

Table 1

Theoretical Knowledge Examinations Requirement

3. A QMP, having met the relevant requirements, shall be considered for exemption from seating the full set of PPL, CPL and ATPL subjects. An exempted QMP shall sit for the following subjects for issuance of a PPL, CPL and CPL/IR (Frozen ATPL):

Issuance of License	PPL	CPL	CPL/IR (without frozen ATPL)		CPL/IR (Frozen ATPL)			
QMP Flying Qualification	Pilot	Pilot	Non IRT cert.	IRT cert.	Non IP/QFI/QHI	Non IP/QFI/QHI with SACC	IP/QFI/QHI	IP/QFI/QHI with SACC
Theoretical Knowledge examination papers	PPL Lvl	CPL Lvl	ATPL LEVEL					
Air Law 1	✓	✓	✓	✓	✓	✓	✓	✓
Air Law II	-	✓	✓	✓	✓	✓	✓	✓
Human Performance and Limitations	-	✓	✓	✓	✓	✓	✓	✓
Mass and Balance	-	✓	✓	✓	✓	✓	-	-
Performance (A/H)	-	-	-	-	✓	✓	✓	✓
Operation Procedures	-	-	✓	✓	✓	✓	✓	-
IFR Communications	-	-	✓	✓	✓	-	-	-
Instrument	-	-	-	-	✓	✓	✓	✓
Radio Navigation	-	-	✓	-	✓	✓	✓	✓
Meteorology	-	-	✓	-	✓	✓	✓	✓
Flight Planning and Monitoring	-	-	-	-	✓	✓	✓	✓
General Navigation	-	-	-	-	✓	✓	✓	✓
Aircraft Type Technical	✓	✓	✓	✓	✓	✓	✓	✓

Table 2

Note:
IP – Instructor Pilot
QFI – Qualified Flying Instructor
QHI – Qualified Helicopter Instructor

SACC – Senior Aircraft Commander Course

4. Flying training requirement for QMP

a) QMP's with Qualified Flying Instructor (QFI) rating, more than 25 hours of multi-engine experience and with minimum of 3 hours Pilot-in-command on multi-engine, to undergo multi-engine training as follows:

1) 2 hours of theory lesson;
2) pass type technical test;
3) 1 hour in an approved FSTD;
4) 3 hours of flight training; and
5) skill test.

b) QMP's with QFI rating and without multi-engine experience, to undergo multi-engine training as follows:

1) 4 hours of theory lesson;
2) pass type technical test;
3) 3 hours in an approved FSTD;
4) 5 hours of flight training; and
5) skill test.

c) QMP's without QFI rating and with multi-engine experience shall undergo multi-engine training as per the ATO training syllabus as follows:

1) 4 hours of theory lesson;
2) pass type technical test;
3) 3 hours in an approved FSTD;
4) 5 hours of flight training;
5) skill test;

d) QMP's without QFI rating and without multi-engine experience shall undergo multi-engine training as per the ATO training syllabus as follows:

1) 7 hours of theory lesson;
2) pass type technical test;
3) 4 hours in an approved FSTD;
4) 8 hours of flight training;
5) skill test;

6. For the issuance of ATPL, QMP is exempted from provision 2.6.3.1.1.1 (e) and 2.6.4.1.1.1 (e) of this CAD.

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7.6 Appendix 6 - Crediting of Theoretical Knowledge

(Chapter 2, 2.1.9.5 refers)

A. Crediting of theoretical knowledge for the issue of a pilot licence — abridged instruction and examination requirements

1. PPL and BPL

1.1 For the issue of a PPL or BPL, the holder of a licence in another category of aircraft shall receive theoretical knowledge instruction and pass theoretical knowledge examinations to the appropriate level in the following subjects:

a) Principles of Flight

b) Operational Procedures

c) Flight Performance and Planning

d) Aircraft General Knowledge

e) Navigation

2. CPL

2.1 An applicant for a CPL holding a CPL in another category of aircraft shall have received theoretical knowledge abridged instruction on an approved course according to the differences identified between the CPL syllabi for different aircraft categories.

2.2 The applicant shall pass theoretical knowledge examinations as defined in this CAD for the following subjects in the appropriate aircraft category:

a) Aircraft General Knowledge: Airframe and Systems, Electrics, Powerplant, Emergency Equipment.

b) Aircraft General Knowledge: Instrumentation

c) Performance Aeroplanes or Helicopters, as applicable.

d) Operational Procedures; and

e) Principles of Flight.

2.3 An applicant for a CPL having passed the relevant theoretical examinations for an IR in the same category of aircraft is credited towards the theoretical knowledge requirements in the following subjects:

a) Human Performance

b) Meteorology

3. ATPL

3.1 An applicant for an ATPL holding an ATPL in another category of aircraft shall have received theoretical knowledge abridged instruction at an ATO according to the differences identified between the ATPL syllabi for different aircraft categories.

3.2 The applicant shall pass theoretical knowledge examinations as defined in this CAD for the following subjects in the appropriate aircraft category:

a) Aircraft General Knowledge: Airframe and Systems, Electrics, Powerplant, Emergency Equipment.

b) Aircraft General Knowledge: Instrumentation

c) Performance Aeroplanes or Helicopters, as applicable

d) Operational Procedures; and

e) Principles of Flight.

3.3 An applicant for an ATPL(A) having passed the relevant theoretical examination for a CPL(A) is credited towards the theoretical knowledge requirements in in the following subjects:

a) Air Law I and Air Law II; and

b) VFR Communications.

3.4 An applicant for an ATPL(H), having passed the relevant theoretical examinations for a CPL(H) is credited towards the theoretical knowledge requirements in the following subjects:

a) Air Law I and Air Law II

b) Principles of Flight (Helicopter); and

c) VFR Communications.

3.5 An applicant for an ATPL(A) having passed the relevant theoretical examination for an IR(A) is credited towards the theoretical knowledge requirements in subject IFR Communications.

3.6 An applicant for an ATPL(H) with an IR(H), having passed the relevant theoretical examinations for a CPL(H) is credited towards the theoretical knowledge requirements in the following subjects:

a) Principles of Flight (Helicopter); and

b) VFR Communications.

4. IR

4.1 An applicant for an IR having passed the relevant theoretical examinations for a CPL in the same aircraft category is credited towards the theoretical knowledge requirements in the following subjects:

a) Human Performance

b) Meteorology; and

c) Communications.

4.2 An applicant for an IR(H) having passed the relevant theoretical examinations for an ATPL(H) is required to pass the following examination subjects:

a) Air Law I and Air Law II.

b) Flight Planning and Flight Monitoring.

c) Radio Navigation; and

d) IFR Communications.

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7.7 Appendix 7 - Training courses for the issue of a CPL and an ATPL

1. This appendix describes the requirements for the different types of training courses for the issue of a CPL and an ATPL, with and without an IR.

2. An applicant wishing to transfer to another ATO during a training course shall apply to the CAAM for a formal assessment of the further hours of training required.

A. CPL/IR (Frozen ATPL) integrated course – Aeroplanes

General

1. The aim of the CPL/IR (Frozen ATPL) integrated course is to train pilots to the level of proficiency necessary to enable them to operate as co-pilot on multi-pilot multi-engine aeroplanes in CAT and to obtain the CPL(A)/IR.

2. An applicant wishing to undertake a CPL/IR (Frozen ATPL) integrated course shall complete all the instructional stages in one continuous course of training as arranged by an ATO.

3. An applicant may be admitted to training either as an ab-initio entrant, or as a holder of a PPL(A) or PPL(H) issued in accordance with Annex 1 to the Chicago Convention. In the case of a PPL(A) or PPL(H) entrant, 50% of the hours flown prior to the course shall be credited, up to a maximum of 40 hours flying experience, or 45 hours if an aeroplane night rating has been obtained, of which up to 20 hours may count towards the requirement for dual instruction flight time.

4. The course shall comprise:
   a) theoretical knowledge instruction to the ATPL(A) knowledge level;
   b) visual and instrument flying training.
   c) training in MCC for the operation of multi-pilot aeroplanes; and
   d) UPRT in accordance with ICAO Doc 9868 PANS-TRG unless applicants have already completed this training course before starting the CPL/IR (Frozen ATPL) integrated course.

5. An applicant failing or unable to complete the entire CPL/IR (Frozen ATPL) course may apply to the CAAM for the theoretical knowledge examination and skill test for a licence with lower privileges and an IR if the applicable requirements are met.

Theoretical Knowledge

6. A CPL/IR (Frozen ATPL) theoretical knowledge course shall comprise at least 750 hours of instruction.

7. The MCC course shall comprise at least 25 hours of theoretical knowledge instruction and exercises.

Theoretical Knowledge Examination

8. An applicant shall demonstrate the level of knowledge appropriate to the privileges granted to the holder of an ATPL(A).

Flying Training

9. The flying training, not including type rating training, shall comprise a total of at least 200 hours, to include all progress tests, of which up to 55 hours for the entire course may be instrument ground time. Within the total of 200 hours, applicants shall complete at least:

a) 95 hours of dual instruction, of which up to 55 hours may be instrument ground time;
b) 70 hours as PIC, including VFR flight and instrument flight time as student pilot in-command (SPIC). The instrument flight time as SPIC shall only be counted as PIC flight time up to a maximum of 20 hours;
c) 50 hours of cross-country flight as PIC, including a VFR cross-country flight of at least 540 km (300 NM), in the course of which full stop landings at two aerodromes different from the aerodrome of departure shall be made;
d) 5 hours flight time shall be completed at night, comprising 3 hours of dual instruction, which will include, at least:

    1) 1 hour of cross-country navigation;

    2) and 5 solo take-offs; and

    3) 5 solo full stop landings

e) UPRT flight instruction in accordance with ICAO Doc 9868 PANS-TRG;
f) 115 hours of instrument time comprising, at least:

    1) 20 hours as SPIC;

    2) 15 hours MCC, for which an FFS or FNPT II may be used.

    3) 50 hours of instrument flight instruction, of which up to

        i) 25 hours may be instrument ground time in a FNPT I, or
        ii) 40 hours may be instrument ground time in a FNPT II, FTD 2 or FFS, of which up to 10 hours may be conducted in an FNPT I.

g) 35 hours in a multi-engine aeroplane which:

    1) certificated for the carriage of at least 4 persons; and

    2) has a variable pitch propeller and retractable landing gear.

Skill Test

10. Upon completion of the related flying training, the applicant shall take the CPL(A) skill test on a single-engine and a multi-engine aeroplane and the IR skill test on a multiengine aeroplane.

B. CPL/IR (frozen ATPL) integrated course — Helicopters

General

1. The aim of the CPL(H)/IR (frozen ATPL) integrated course is to train pilots to the level of proficiency necessary to enable them to operate as co-pilot on multi-pilot multi-engine helicopters in CAT and to obtain the CPL(H)/IR.

2. An applicant wishing to undertake an CPL(H)/IR (frozen ATPL) integrated course shall complete all the instructional stages in one continuous course of training as arranged by an ATO.

3. An applicant may be admitted to training either as an ab-initio entrant, or as a holder of a PPL(H) issued in accordance with Annex 1 to the Chicago Convention. In the case of a PPL(H) entrant, 50% of the relevant experience shall be credited, up to a maximum of:

   a) 40 hours, of which up to 20 hours may be dual instruction; or
   b) 50 hours, of which up to 25 hours may be dual instruction, if a helicopter night rating has been obtained.

4. The course shall comprise:

a) theoretical knowledge instruction to the ATPL(H) and IR knowledge level;

b) visual and instrument flying training; and

c) training in MCC for the operation of multi-pilot helicopters.

5. An applicant failing or unable to complete the entire ATP(H) /IR course may apply to the CAAM for the theoretical knowledge examination and skill test for a licence with lower privileges and an IR, if the applicable requirements are met.

Theoretical Knowledge

6. An ATPL(H)/IR theoretical knowledge course shall comprise at least 800 hours of instruction.

7. The MCC course shall comprise at least 25 hours of theoretical knowledge instruction exercises.

Theoretical Knowledge Examination

8. An applicant shall demonstrate the level of knowledge appropriate to the privileges granted to the holder of an ATPL(H) and an IR.

Flying Training

9. The flying training shall comprise a total of at least 195 hours, to include all progress tests. Within the total of 195 hours, applicants shall complete at least:

a) 140 hours of dual instruction, of which:

1) 75 hours visual instruction may include:
   i) 30 hours in a helicopter FFS, level C/D, or
   ii) 25 hours in a FTD 2,3, or
   iii) 20 hours in a helicopter FNPT II/III, or
   iv) 20 hours in an aeroplane;

2) 50 hours instrument instruction may include:
   i) up to 20 hours in a helicopter FFS or FTD 2,3 or FNPT II/III, or
   ii) 10 hours in at least a helicopter FNPT 1 or an aeroplane;

3) 15 hours MCC, for which a helicopter FFS or helicopter FTD 2,3(MCC) or FNPT II/III(MCC) may be used.

If the helicopter used for the flying training is of a different type from the helicopter FFS used for the visual training, the maximum credit shall be limited to that allocated for the helicopter FNPT II/III.

b) 55 hours as PIC, of which 40 hours may be as SPIC. At least 14 hours solo day and 1 hour solo night shall be made.

c) 50 hours of cross-country flight, including at least 10 hours of cross-country flight as SPIC including a VFR cross-country flight of at least 185 km (100 NM) in the course of which landings at two different aerodromes from the aerodrome of departure shall be made;

d) 5 hours flight time in helicopters shall be completed at night comprising 3 hours of dual instruction including at least 1 hour of cross-country navigation and 5 solo night circuits. Each circuit shall include a take-off and a landing;

e) 50 hours of dual instrument time comprising:

1) 10 hours basic instrument instruction time, and
2) 40 hours IR Training, which shall include at least 10 hours in a multi-engine IFR-certificated helicopter.

Skill Tests

10. Upon completion of the related flying training, the applicant shall take the CPL(H) skill test on a multi-engine helicopter and the IR skill test on an IFR certificated multi-engine helicopter and shall comply with the requirements for MCC training.

C. CPL (frozen ATPL) integrated course — Helicopters

General

1. The aim of the CPL(H) (frozen ATPL) integrated course is to train pilots to the level of proficiency necessary to enable them to operate as co-pilot on multi-pilot multi-engine helicopters limited to VFR privileges in CAT and to obtain the CPL(H).

2. An applicant wishing to undertake an CPL(H) (frozen ATPL) integrated course shall complete all the instructional stages in one continuous course of training as arranged by an ATO.

3. An applicant may be admitted to training either as an ab-initio entrant, or as a holder of a PPL(H) issued in accordance with Annex 1 to the Chicago Convention. In the case of a PPL(H) entrant, 50% of the relevant experience shall be credited, up to a maximum of:
   a) 40 hours, of which up to 20 hours may be dual instruction; or
   b) 50 hours, of which up to 25 hours may be dual instruction, if a helicopter night rating has been obtained.

4. The course shall comprise:

   a) theoretical knowledge instruction to the ATPL(H) knowledge level;
   b) visual and basic instrument flying training; and
   c) training in MCC for the operation of multi-pilot helicopters.

5. An applicant failing or unable to complete the entire CPL(H) (frozen ATPL) course may apply to the CAAM for the theoretical knowledge examination and skill test for a licence with lower privileges, if the applicable requirements are met.

Theoretical Knowledge

6. An CPL(H) (frozen ATPL) theoretical knowledge course shall comprise at least 800 hours of instruction.

7. The MCC course shall comprise at least 20 hours of theoretical knowledge instruction exercises.

Theoretical Knowledge Examination

8. An applicant shall demonstrate the level of knowledge appropriate to the privileges granted to the holder of an ATPL (H).

Flying Training

9. The flying training shall comprise a total of at least 150 hours, to include all progress tests. Within the total of 150 hours, applicants shall complete at least:

   a) 95 hours of dual instruction, of which:
      1) 75 hours visual instruction may include:
         i) 30 hours in a helicopter FFS level C/D, or
         ii) 25 hours in a helicopter FTD 2,3, and

iii) 20 hours in a helicopter FNPT II/III.

2) 10 hours basic instrument instruction may include 5 hours in at least a helicopter FNPT I or an aeroplane;

3) 10 hours MCC, for which a helicopter: helicopter FFS or FTD 2,3(MCC) or FNPT II/III(MCC) may be used

If the helicopter used for the flying training is of a different type from the helicopter FFS used for the visual training, the maximum credit shall be limited to that allocated for the helicopter FNPT II/III.

b) 55 hours as PIC, of which 40 hours may be as SPIC. At least 14 hours solo day and 1 hour solo night shall be made;

c) 50 hours of cross-country flight, including at least 10 hours of cross-country flight as SPIC, including a VFR cross-country flight of at least 185 km (100 NM) in the course of which landings at two different aerodromes from the aerodrome of departure shall be made;

d) 5 hours flight time in helicopters shall be completed at night comprising 3 hours of dual instruction including at least 1 hour of cross-country navigation and 5 solo night circuits. Each circuit shall include a take-off and a landing.

Skill Tests

10. Upon completion of the related flying training the applicant shall take the CPL(H) skill test on a multi-engine helicopter and comply with MCC requirements.

D. CPL/IR integrated course — Helicopters

General

1. The aim of the CPL(H)/IR integrated course is to train pilots to the level of proficiency necessary to operate single-pilot multi-engine helicopters and to obtain the CPL(H)/IR multi-engine helicopter.

2. An applicant wishing to undertake a CPL(H)/IR integrated course shall complete all the instructional stages in one continuous course of training as arranged by an ATO.

3. An applicant may be admitted to training either as an ab-initio entrant, or as a holder of a PPL(H) issued in accordance with Annex 1 to the Chicago Convention. In the case of an entrant holding a PPL(H), 50% of the relevant experience shall be credited, up to a maximum of:
   a) 40 hours, of which up to 20 hours may be dual instruction; or
   b) 50 hours, of which up to 25 hours may be dual instruction, if a helicopter night rating has been obtained.

4. The course shall comprise:

   a) theoretical knowledge instruction to CPL(H) and IR knowledge level, and the initial multi-engine helicopter type rating; and
   b) visual and instrument flying training.

5. An applicant failing or unable to complete the entire CPL(H)/IR course may apply to the CAAM for the theoretical knowledge examination and skill test for a licence with lower privileges and an IR, if the applicable requirements are met.

Theoretical Knowledge

6. A CPL(H)/IR theoretical knowledge course shall comprise at least 800 hours of instruction.

Theoretical Knowledge Examination

7. An applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a CPL(H) and an IR.

Flying Training

8. The flying training shall comprise a total of at least 180 hours including all progress tests. Within the 180 hours, applicants shall complete at least:

   a) 125 hours of dual instruction, of which:
      1) 75 hours visual instruction, which may include:
         i) 30 hours in a helicopter FFS level C/D, or
         ii) 25 hours in a helicopter FTD 2,3, or
         iii) 20 hours in a helicopter FNPT II/III, or
         iv) 20 hours in an aeroplane.

   b) 50 hours instrument instruction which may include:

1) up to 20 hours in a helicopter FFS or FTD 2,3, or FNPT II,III, or
2) 10 hours in at least a helicopter FNPT I or an aeroplane.

If the helicopter used for the flying training is of a different type from the FFS used for the visual training, the maximum credit shall be limited to that allocated for the FNPT II/III.

c) 55 hours as PIC, of which 40 hours may be as SPIC. At least 14 hours solo day and 1 hour solo night shall be made;

d) 10 hours dual cross-country flying;

e) 10 hours of cross-country flight as PIC, including a VFR cross-country flight of at least 185 km (100 NM) in the course of which full stop landings at two different aerodromes from the aerodrome of departure shall be made;

f) 5 hours of flight time in helicopters shall be completed at night comprising 3 hours of dual instruction including at least 1 hour of cross-country navigation and 5 solo night circuits. Each circuit shall include a take-off and a landing;

g) 50 hours of dual instrument time comprising:
1) 10 hours basic instrument instruction time; and
2) 40 hours IR Training, which shall include at least 10 hours in a multiengine IFR-certificated helicopter.

Skill Tests

10. Upon completion of the related flying training, the applicant shall take the CPL(H) skill test on either a multi-engine or a single-engine helicopter and the IR skill test on an IFR certificated multi- engine helicopter.

E. CPL integrated course — Helicopters

General

1. The aim of the CPL(H) integrated course is to train pilots to the level of proficiency necessary for the issue of a CPL(H).

2. An applicant wishing to undertake a CPL(H) integrated course shall complete all the instructional stages in one continuous course of training as arranged by an ATO.

3. An applicant may be admitted to training either as an ab-initio entrant, or as a holder of a PPL(H) issued in accordance with Annex 1 to the Chicago Convention. In the case of an entrant holding a PPL(H), 50% of the relevant experience shall be credited, up to a maximum of:

   (a) 40 hours, of which up to 20 hours may be dual instruction; or

   (b) 50 hours, of which up to 25 hours may be dual instruction if a helicopter night rating has been obtained.

4. The course shall comprise:

   (a) theoretical knowledge instruction to CPL(H) knowledge level; and

   (b) visual and instrument flying training.

5. An applicant failing or unable to complete the entire CPL(H) course may apply to the CAAM for the theoretical knowledge examination and skill test for a licence with lower privileges, if the applicable requirements are met.

Theoretical Knowledge

6. An approved CPL(H) theoretical knowledge course shall comprise at least 500 hours of instruction or 300 hours if the applicant is the holder of a PPL.

Theoretical Knowledge Examination

7. An applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a CPL(H).

Flying Training

8. The flying training shall comprise a total of at least 135 hours, to include all progress tests, of which up to 5 hours may be instrument ground time. Within the 135 hours total, applicants shall complete at least:

   (a) 85 hours of dual instruction, of which:

      (1) up to 75 hours may be visual instruction, and may include:

         (i) 30 hours in a helicopter FFS level C/D, or

         (ii) 25 hours in a helicopter FTD 2,3, or

(iii) 20 hours in a helicopter FNPT II/III, or

(iv) 20 hours in an aeroplane.

(2) up to 10 hours may be instrument instruction and may include 5 hours in at least a helicopter FNPT I or an aeroplane.

If the helicopter used for the flying training is of a different type from the FFS used for the visual training, the maximum credit shall be limited to that allocated for the FNPT II/III.

(b) 50 hours as PIC, of which 35 hours may be as SPIC. At least 14 hours solo day and 1 hour solo night shall be made;

(c) 10 hours dual cross-country flying;

(d) 10 hours of cross-country flight as PIC, including a VFR cross-country flight of at least 185 km (100 NM) in the course of which full stop landings at two different aerodromes from the aerodrome of departure shall be made;

(e) 5 hours flight time in helicopters shall be completed at night comprising 3 hours of dual instruction including at least 1 hour of cross-country navigation and 5 solo night circuits. Each circuit shall include a take-off and a landing;

(f) 10 hours of instrument dual instruction time, including at least 5 hours in a helicopter.

Skill Test

9. Upon completion of the related flying training, the applicant shall take the CPL(H) skill test.

7.8 Appendix 8 - Cross-crediting of the IR part of a class or type rating proficiency check

(Chapter 2, 2.7.2.5 refers)

A. Aeroplanes

Credits shall be granted only when the holder is renewing IR privileges for single-engine and single-pilot multi-engine aeroplanes, as appropriate.

When a proficiency check including IR is performed, and the holder has a valid:	Credit is valid towards the IR part in a proficiency check for:
MP type rating; High performance complex aeroplane type rating	SE class * and SE type rating *, and SP ME class, and SP ME non-high performance complex aeroplane type rating, only credits for section 3B of the skill test for single pilot non-high performance complex aeroplane of Appendix 9*
SP ME non-high performance complex aeroplane type rating, operated as single-pilot	SP ME class *, and SP ME non-high performance complex aeroplane type rating, and SE class and type rating *
SP ME non-high performance complex aeroplane type rating, restricted to MP operation	a. SP ME class *, and b. SP ME non-high performance complex aeroplane type rating *, and c. SE class and type rating *
SP ME class rating, operated as single-pilot	SE class and type rating, and SP ME class, and SP ME non-high performance complex aeroplane type rating SP ME class rating, restricted to MP operation SE class and type rating *, and SP ME class *, and SP ME non-high performance complex aeroplane type rating *
SP SE class rating	SE class and type rating
SP SE type rating	SE class and type rating

Table 1

* Provided that within the preceding 12 months the applicant has flown at least three IFR departures and approaches exercising PBN privileges, including one RNP APCH approach on an SP class or type of aeroplane in SP operations, or, for multi-engine, other than HP complex aeroplanes, the applicant has passed section 6 of the skill test for SP, other than HP complex aeroplanes flown solely by reference to instruments in SP operations.

B. Helicopters

Credits shall be granted only when the holder is renewing IR privileges for single-engine and single-pilot multi-engine helicopters as appropriate.

When a proficiency check, including IR, is performed and the holder has a valid:	Credit is valid towards the IR part in a proficiency check for:
MPH type rating	SE type rating *, and SP ME type rating *.
SP ME type rating, operated as single-pilot	SE type rating, SP ME type rating.
SP ME type rating, restricted to multi-pilot operation	SE type rating, * SP ME type rating *.

Table 2

* Provided that within the preceding 12 months at least three IFR departures and approaches exercising PBN privileges, including one RNP APCH approach (could be a Point in Space (PinS) approach), have been performed on a SP type of helicopter in SP operations.

7.9 Appendix 9 - Type Rating & Licence Endorsement

(Chapter 2, 2.1.3.2 refers)

A. General

1. These lists constitute the class and type of aircraft categorisations in accordance with category of aircraft, class of aeroplane, and type of aircraft.

2. The lists further provide aircraft specific references relevant to flight crew qualifications and air operations. CAD 1, Section 2.1.4 describes the circumstances in which a class or type rating is required and establishes the need to publish type rating and licence endorsement lists by the CAAM.

B. Aircraft Class Ratings

1. Aircraft class rating designations are incorporated within the lists. Aircraft within a class rating are not individually listed, except for all aircraft within the class rating SET, and for other aircraft which have received a specific licence endorsement and/or an operational evaluation.

C. Class Rating "SET" for Single Pilot (“SP”) Single-Engine Turbo-Prop Aircraft

1. A class rating "SET" for SP single-engine turbo-prop aircraft is established with in the lists. Aircraft which are to be added to the class rating SET require an operational suitability data evaluation. All aircraft within the class ratings SET are listed individually in the table.

D. Type Rating and Licence Endorsement Lists

1. These lists provide users a consolidated overview of established type rating designations and associated licence endorsements. The Type Rating and Licence Endorsement Lists do not include information for all aircraft. In particular, aircraft may not be included if they are part of a class rating SEP (land/sea) and MEP (land/sea).

2. The lists further indicate whether aircraft are defined as complex aircraft in accordance with the Basic Regulation and if they are classified as SP High Performance Aircraft (HPA).

E. Licence Endorsement

1. The licence endorsement is established with respect to the category of aircraft, class of aeroplane, and type of aircraft.

2. Occasionally, the addition of a new aircraft variant may lead to a change in an existing licence endorsement. In these cases, the previous licence endorsement remains valid but should be replaced with the amended endorsement during the next routine licence renewal.

F. Aircraft Variants

1. Aircraft within class ratings

a) Aircraft within class ratings may not have associated OSD in accordance with

b) Initial Airworthiness. The Type Rating and Licence Endorsement Lists Flight Crew provide categories of class ratings‑such as SEP, MEP, SET, etc.‑and indicate aircraft which are considered as variants.

a) Aircraft within the same class rating which are separated by a horizontal line in the tables require differences training, whereas those aircraft which are contained in the same box require familiarisation training when transitioning from one aircraft to another. As an example, SEP (land) aircraft with variable pitch propeller and SEP (land) aircraft with retractable undercarriage require differences training (unless credits have been established through the OSD), whereas two different SEP (land) aircraft, both with cabin pressurisation require familiar is action training.

b) All aircraft within the same class rating MEP or SET require differences training unless credits have been established by OSD in accordance with Initial Airworthiness.

c) Unless determined by the OSD, renewal for each SET aircraft must be accomplished individually.

Table 1 – Type Rating and Licence Endorsement Aeroplane

Manufacturer	Aircraft model / name	Licence endorsement	Variants	Complex	SP / SP HPA / MP	OE GM / OEB / OSD FC available	Remarks
All manufacturers	All powered sailplanes having an integrally mounted, non-retractable engine and a non-retractable propeller, capable of taking off and climbing under its own power.	TMG	X	—	SP		Class rating TMG Aircraft within the class rating touring motor glider (TMG) are not listed individually in this table, unless specific provisions have been established.
All manufacturers	Single-engine piston (land)	SEP (land)	X	—	SP		Class rating SEP (land) Aircraft within the class rating SEP (land) are not listed individually in this table, unless specific provisions have been established.
	Single-engine piston (land) with variable pitch propellers (VP)						
	Single-engine piston (land) with retractable undercarriage (RU)						
	Single-engine piston (land) with turbo- / super-charged engines (T)						
	Single-engine piston (land) with cabin pressurisation (P)						
	Single-engine piston (land) with tail wheels (TW)						
	Single-engine piston (land) with electronic flight instrument system (EFIS)						
	Single-engine piston (land) with single lever power control (SLPC)						
All manufacturers	Single-engine turbo-prop engines	SET	X	—	SP		Class rating SET All aircraft within the class rating SET are listed individually in this table and require EASA classification. All aircraft within the class rating SET require differences training, unless indicated otherwise in the list. Revalidation for each SET aircraft must be accomplished individually, unless indicated otherwise in the list.
All manufacturers	Single-engine piston (sea)	SEP (sea)	X	—	SP		Class rating SEP (sea) Aircraft within the class rating SEP (sea) are not listed individually in this table, unless specific provisions have been established.
	Single-engine piston (sea) with variable pitch propellers (VP)						
	Single-engine piston (sea) with turbo- / super-charged engines (T)						
	Single-engine piston (sea) with cabin pressurisation (P)						

	Single-engine piston (sea) with electronic flight instrument system (EFIS) Single-engine piston (sea) with single lever power control (SLPC)						
All manufacturers	Multi-engine piston (land)	MEP (land)	X	—	SP		Class rating MEP (land) Aircraft within the class rating MEP (land) are not listed individually in this table, unless specific provisions have been established. All aircraft within the same class rating MEP require differences training, unless indicated otherwise in the list.
All manufacturers	Multi-engine piston (sea)	MEP (sea)	X	—	SP		Class rating MEP (sea) Aircraft within the class rating MEP (sea) are not listed individually in this table, unless specific provisions have been established. All aircraft within the same class rating MEP require differences training, unless indicated otherwise in the list.
Aerospatiale	MS 760 Paris	S760	—	X	SP HPA	—	
Aerospatiale / Sud Aviation	SN601 Corvette	SN601	—	X	MP	—	
	SE 210 III SE 210 III R SE 210 VIN	SE210/10B3/11/12	X	X	MP	—	
	SE 10B3						
	SE 11						
	SE 12						
Aerospatiale / Nord Aviation	Nordatlas 2501	ND25	—	X	MP	—	
Aerospatiale / Nord Aviation	C160 P Transall	ND16	—	X	MP	—	
Aerospatiale / Nord Aviation	260 A Nord 262 A-B-C Nord	ND26	—	X	MP	—	
Aero Spaceline	377 SGTF Super Guppy	SuperGuppy	—	X	MP	—	
AERO Vodochody AEROSPACE a.s.	Ae 270	Aero Vodochody SET	—	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
Airbus	A300 -B1 -B2 series -B4 series	A300	X	X	MP	X	

	-C4-200 series -F4-200 series						
Airbus	A300 -FFCC	A300FFCC	—	X	MP	—	
Airbus	A310 - 200 series - 300 series A300 - B4 600 series - C4 600 series - F4 600 series	A310/300-600	X	X	MP	—	OE GM (OEB Report for A300/310 stop rudder input warning (SRIW), dated 27 March 2015)
Airbus	A300 - 600ST (Beluga)	A300-600ST	—	X	MP	—	
Airbus	A318 - 100 series A319 - 100 series A320 - 100 series - 200 series - neo A321 - 100 series - 200 series - neo	A320	X	X	MP	X	OSD FC A320
Airbus	A330 - 300 series - 200 series - 200 F - 200 MRTT FAF STC - 900 series - 800 series	A330/350	X	X	MP	X	OSD FC A330 MRTT FAF STC A330/350 Operational Suitability Data (OSD) Flight Crew.
	A330 - 700L						
	A350 - 900 series -1000 series						
Airbus	A340 - 200 series - 300 series - 500 series - 600 series	A340	X	X	MP	X	OSD FC A340
Airbus	A380 - 800 series	A380	—	X	MP	X	OSD FC A380
Airbus	A400M	A400M	—	X	MP	—	
Airbus Canada Limited Partnership (ACLP)	BD500-1A10 (A220-100) BD500-1A11 (A220-300)	BD-500	X	X	MP	X	OSD FC A220 (BD 500)
Air Tractor Inc.	AT-402, -402A, -402B	AT-4/5/6/8 SET	X	—	SP	—	Class rating SET Class rating SET has been established by the JAA. OE GM AT-4/5/6/8 SET, dated 03 Jan 2018. Training levels between AT-802/A and AT-802/A (amphibious) have not been evaluated.
	AT-502, -502A, -502B						
	AT-503, -503A						
	AT-602						
	AT-802 AT-802 A			X			
	AT-802 (amphibious) AT-802 A (amphibious)						
ALENIA AERMACCHI	C27J	C27J	—	X	MP	—	
Antonov	An-26 An-26B	AN26	X	X	MP	—	
Asta GAF	Nomad -22B -24A	AstaMET	X	X	SP	—	

ATR	ATR 42 (not PEC equipped) - 42-200 / -300 / -320	ATR42/72	X	X	MP	X	OSD FC ATR 42/72 PEC = propeller electronic control
	ATR 42 (PEC equipped) - 42-400 / -500 ATR 72 (not PEC equipped) - 72-101 / -102 / -201 / -202 / -211 / -212 ATR 72 (PEC equipped) - 72-101 / -102 / -201 / -202 (with mod 4371) - 72-211 / -212 (with mod 3973 or 4371)						
	ATR 42 (glass cockpit or 42-600) - 42-500 (with mod 5948) ATR 72 (glass cockpit or 72-600) - 72-212A (with mod 5948)						
BAE Systems (Operations) Ltd	HS 748 series	HS748	—	X	MP	—	
BAE Systems (Operations) Ltd	Jetstream 41	Jetstream 41	—	X	MP	—	
Beechcraft Raytheon	RA-390	RA390	—	X	SP HPA	—	
Beriev	Be-200ES-E	BER2E	—	X	MP	—	
Boeing	B707 -100 series -300 series	B707/720	X	X	MP	—	
	B720						
Boeing	B717 series	B717	—	X	MP	—	
Boeing	B727 -100 series -200 series	B727	X	X	MP	—	
Boeing	B737 -100 series -200 series	B737 100-200	X	X	MP	—	
Boeing	B737 CL -300 / -400 / -500 series	B737 300-900	X	X	MP	X	OSD FC B737
	B737 NG -600 / -700 / -800 / -900 / -900 ER series B737 MAX -8 / -9 series						
Boeing	B747 -100 series B747 -200 series B747 -300 series	B747 100-300	X	X	MP	—	
	B747-SP						
Boeing	B747 - 400 series - 400 F series	B747-400	X	X	MP	X	OSD FC B747
	B747 - 8 series - 8F series						

Boeing	B757 - 200 series - 300 series B767 - 200 series - 300 series - 300 F series B767 -400 ER	B757/767	X	X	MP	X	OSD FC B757/767
Boeing	B777 - 200 series -300 series B777F B787 - 8 series - 9 series -10 series	B777/787	X	X	MP	X	OSD FC B777/787
Bombardier Inc.	CL 215	CL215	—	X	MP	—	
Bombardier Inc.	CL 215T	CL215T	—	X	MP	—	
Bombardier Inc.	CL 415	CL415	—	X	MP	—	
Bombardier Inc.	Challenger series: CL 600 CL 601-1A CL 601-3A	CL600/601	X	X	MP	—	
Bombardier Inc.	CL-600-2B16 - Challenger 604 CL-600-2B16 - Challenger 605 - Challenger 650	CL604/605	X	X	MP	X	OSD FC CL-600-2B16
Bombardier Inc.	CL600-2B19 CL 65 Regional Jet series CRJ - 100 - 200 - 440 - Challenger 850 CL600-2C10 - 700 - 701 - 702 - Challenger 870 CL600-2D15 - 705 CL600-2D24 - 900 - Challenger 890 CL600-2E25 - 1000	CL65	X	X	MP	X	OSD FC CRJ Series OE GM (OEB report Rockwell Collins HGS 4200 dual head-up guidance system (STC), dated 4 November 2011)
Bombardier Inc.	BD-100-1A10 - Challenger 300 - Challenger 350	CL30	X	X	MP	X	OSD FC Challenger 300/350
Bombardier Inc.	BD700-1A10 (Global Express XRS) BD700-1A11 (Global 5000) BD700-1A10 GVFD (Global 6000) BD700-1A11 GVFD (Global 5000 GVFD) BD-700-1A10 (Global 6500) BD-700-1A11 (Global 5500)	BD-700	X	X	MP	X	OSD FC BD-700

Bombardier Inc.	BD700-2A12 (Global 7500)	G7500		X	MP	X	OSD FC BD-700 Rev. 0 dated 6 February 2019
Bombardier Inc.	DHC8 -100 series -200 series -300 series	DHC8	X	X	MP	X	OSD FC DHC8
	DHC8 -400 series						
British Aerospace / AVRO	ATP Jetstream 61	Bae/ATP/Jetstream 61	—	X	MP	—	
British Aerospace / AVRO	AVRO RJ series 146 -100 series 146 -200 series 146 -300 series	AVRORJ/Bae146	X	X	MP	—	
British Aerospace / AVRO	BAC 1-11 -200 series -400 series -500 series	BAC1-11	X	X	MP	—	
Casa	C212 series	C212	—	X	MP	—	
Casa	C-295	C295	—	X	MP	—	
Casa	CN-235	CN235	—	X	MP	—	
Cessna	206 A/T Soloy 207 A/T Soloy 210 (Silver Eagle)	Cessna SET	X	—	SP	—	Class rating SET Class rating SET has been established by the JAA. Training levels between Cessna SET land and sea aircraft have not been evaluated.
	206 A/T Soloy (sea) 207 A/T Soloy (sea)						
	206 with STC 10061949						
	208						
	208 (sea)						
Cessna	C501/500SP	C501/551	X	X	SP HPA	—	
	C551/550SP						
Cessna	510 (Citation Mustang)	C510	—	X	SP HPA	X	OSD FC C510 (Mustang)
Cessna	525 – CJ	C525	X	X	SP HPA	X	OSD FC C525
	525 – CJ1 525A – CJ2						
	525 – CJ1+ 525A – CJ2+ 525B – CJ3						
	525B – CJ3+						
	525C – CJ4						
	525 – M2						
Cessna	C560XL C560XLS	C560XL/XLS	X	X	MP	X	OSD FC C560 XL / XLS / XLS+
	C560XLS+						
Cessna	C 500	C500/550/560	X	X	MP	X	

	C 550 CS 550						
	CS 550 Bravo						
	560 (Citation V)						
	560 (Citation Ultra)						
	560 Encore						OSD FC CE-560 Encore / Encore+
	560 Encore+						
Cessna	C650 Citation III Citation VI Citation VII	C650	X	X	MP	—	
Cessna	C680 Sovereign	C680	X	X	MP	X	OSD FC C680
	C680 Sovereign+ C680A Latitude						
Cessna	C750 Citation X	C750	—	X	MP	X	OSD FC C750
Cessna/ Reims Aviation	F406 425	C406/425	X	X	SP HPA	—	
Cessna/ Reims Aviation	441	C441	—	X	SP HPA	—	
Cirrus Aircraft Company	SF50 Vision Jet	SF50	—	X	SP HPA	X	OSD FC SF50
Consolidated Vultee Aircraft	CV 240-4	CV240/340/440	X	X	MP	—	
	CV 340 CV 440						
Consolidated Vultee Aircraft	CV 580	CV580	—	X	MP	—	
Dassault	Falcon 10	Falcon 10/100	X	X	MP	—	
	Falcon 100						
Dassault	Falcon 20 series	Falcon 20/200	X	X	MP	—	
	Falcon 200						
Dassault	Falcon 900 EX EASy Falcon 900 DX Falcon 900 LX	Falcon900EX EASy	X	X	MP	X	OSD FC Falcon 900EX EASy / 900DX / 900 LX / 900EX ESAyII / 900DX EASyII / 900LX EASyII
	Falcon 900EX EASyII Falcon 900DX EASyII Falcon 900LX EASyII						
Dassault	Falcon 2000	Falcon2000/2000EX	X	X	MP	X	OSD FC Falcon 2000/2000EX
	Falcon 2000 EX						
Dassault	Falcon 2000 EX EASy Falcon 2000 DX Falcon 2000 LX	Falcon2000EX EASy	X	X	MP	X	OSD FC Falcon 2000EX EASy / 2000DX / 2000LX / 2000LXS / 2000S
	Falcon 2000EX EASy II Falcon 2000DX EASy II Falcon 2000LX EASy II Falcon 2000LXS Falcon 2000S						

Dassault	Falcon 7X Falcon 7X EASy II Falcon 8X	Falcon 7X	X	X	MP	X	OSD FC Falcon 7X/8X
Dassault	Mystere Falcon 50 Falcon 50EX Mystere Falcon 900 Falcon 900C Falcon 900EX	Falcon50/900	X	X	MP	X	OSD FC Mystere Falcon 50/50EX/900/900C/900EX
De Havilland – AirTech Canada (Bombardier)	DHC-3 Turbo-Otter	DHC3 SET	X	—	SP	—	Class rating SET Class rating SET has been established by the JAA. Training levels between DHC3 SET land and sea aircraft have not been evaluated.
De Havilland – AirTech Canada (Bombardier)	DHC-2 Turbo-Beaver	DHC2 SET	—	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
De Havilland - Canada (Bombardier)	DHC7	DHC7	—	X	MP	—	
Diamond Aircraft Industries GmbH	DA 42 (DA 42, DA 42 M, DA 42 NG, DA 42 M-NG) DA 62	MEP (land)	X	—	SP	X	Class rating MEP (land) OE GM (OEB report DA42 series, dated 1 November 2014)
Dornier	DO 128-6	D128	—	X	SP	—	
Dornier	DO 28-G92	D28-G92	—	X	SP	—	
Dornier	DO 328-100	DO 328-100	—	X	MP	—	
Dornier	DO 328-300	DO 328-300	—	X	MP	—	
Eclipse Aerospace	Eclipse EA500 - Eclipse 500 - Eclipse 550	EA500	—	X	SP HPA	X	OE GM (OEB report EA500, dated 9 December 2015) OE GM (OEB report Jet Ready EA500 oxygen system (STC), dated 19 July 2011)
Embraer	Bandeirante EMB 110	EMB110	—	X	SP	—	
Embraer	EMB 120 Brasilia	EMB 120	—	X	MP	—	
Embraer	EMB - 145 -135, 145 series	EMB 135/145	X	X	MP	X	OSD FC EMB-135/145
	EMB - 145 -135,145 series equipt with Autothrottle						OSD FC EMB-135/145 Revision D 26. Oct.2018
Embraer	EMB-500 (Phenom 100) EMB-505 (Phenom 300)	EMB 500/505	X	X	SP HPA	X	OSD FC EMB-500/505

Embraer	EMB-550 (Legacy 500) EMB-550 (Praetor 600) EMB-545 (Legacy 450) EMB-545 (Praetor 500)	EMB 550	—	X	MP	X	OSD FC Embraer 550

Embraer	ERJ 170-100 / Embraer 170 ERJ 170-200 / Embraer 175 ERJ 190-100 / Embraer 190 ERJ 190-100 ECJ / Lineage 1000 ERJ 190-200 / Embraer 195	EMB170	X	X	MP	X	OSD FC EMB 170
	ERJ 190-300 / Embraer 190 E2 ERJ 190-400 /Embraer 195 E2						
Fokker / Fairchild	FH227 F 27A/F/J F 27 series	F27	X	X	MP	—	
Fokker / Fairchild	F 28 series	F 28	—	X	MP	—	
Fokker / Fairchild	F 50	F 50	—	X	MP	—	
Fokker / Fairchild	F70 F100	F70/100	X	X	MP	—	
Grob Aircraft AG	G 120 TP - analogue avionics series	G 120TP SET	X	—	SP	—	Class rating SET
	G 120 TP - digital avionics series						
Grob Aircraft AG	G 520T	G520 SET	—	—	SP HPA	—	Class rating SET
Grumman	Tracker S2FT	S2FT	—	X	SP	—	
Grumman Gulfstream	Grumman G-159	Gulfstream I	—	X	MP	—	
Grumman Gulfstream	Grumman G-1159	GulfstreamII/III	X	X	MP	—	
	Grumman G-1159A						
Gulfstream Aerospace Corporation	Am.G-164D	Gulfstream SET	—	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
Gulfstream Aerospace Corporation	Gulfstream 1159C (Gulfstream IV) Gulfstream IV SP (G300/G400)	GIV	—	X	MP	X	OSD FC G-IV
Gulfstream Aerospace Corporation	Gulfstream IV-X (G350/G450)	G-V	X	X	MP	X	OSD FC G-V
	Gulfstream V						
	Gulfstream V-SP (G500/G550)						
Gulfstream Aerospace Corporation	Gulfstream GVI (G650)	GVI	X	X	MP	X	OSD FC GVI (G650)
	Gulfstream GVI (G650) - with PlaneView II Avionics Software Version "Block Point I" (ASC 901) - G650ER						
Gulfstream Aerospace Corporation	Gulfstream G VII-G500 (G500)	GVII	X	X	MP	X	OSD FC GULFSTREAM GVII
	Gulfstream G VII-G600 (G600)						

Gulfstream Aerospace LP (GALP)	Gulfstream G150 (G150)	G150	—	X	MP	X	OSD FC G150
Gulfstream Aerospace LP (GALP)	Gulfstream G200 (G200)	G200	—	X	MP	X	OSD FC G200
Gulfstream Aerospace LP (GALP)	Gulfstream G280 (G280)	G280	—	X	MP	X	OSD FC G280
Handley Page	Herald series	Herald	—	X	MP	—	
Hawker Beechcraft Corporation	4000 (Hawker 4000) 4000 BPU (Hawker 4000 BPU)	HA4T	X	X	MP	X	OSD FC HBC 4000
Hawker Beechcraft Corporation	Hawker 125 Series - Hawker 800XP / Proline 21 - Hawker 750 / Proline 21 Hawker 125 Series - Hawker 900XP / Proline 21 and IFIS 5000 - Hawker 850XP / Proline 21 and IFIS 5000 Bae 125 - 800 series - 1000 series	HS125	X	X	MP	—	Differences training is applicable when equipped with an EFB software package. When the EFB software package is not installed Level B familiarisation is required.
Hawker Beechcraft Corporation	BE-200/B200 BE-C90A/B/GT BE-C90/90-1 BE-E90 BE-F90/F90-1 BE-90/A90/B90 BE-200PL21/B200GT/250 BE-C90GTi/C90GTx	BE90/99/100/200	X	X	SP HPA	X	OSD FC BE90/200
Hawker Beechcraft Corporation	Model G36 with turbo-prop engine (Bonanza)	BE36TC SET	—	—	SP	—	Class rating SET
Hawker Beechcraft Corporation	1900 1900 C 1900 D 300 300LW B300/B300C (except with ProLine 21) B300/B300C (with ProLine 21) 300 (FF serial with ProLine 21)	BE300/1900	X	X	SP HPA	X	OSD FC BE300/1900
Hawker Beechcraft Corporation	Beechjet 400 series MU 300	Beech400/MU300	X	X	MP	—	
	BE-400XT (BE-400 A aircraft modified by EASA STC 10042091 for Proline 21 avionics and by					X	OSD FC BE-400XT

	EASA STC 10042353 for Williams FJ44-3AP engines)						
Hawker Siddeley / Bae	Jetstream 3100 series 3200 series	Jetstream31/32	X	X	MP	—	
Hispano Aviación	HA-200 R, A, B, D (SAETA) HA-200 E (Super SAETA) HA-220	SAETA	X	X	SP HPA	—	
Honda Aircraft Company	HA-420 (HondaJet)	HA-420	X	X	SP HPA	X	OSD FC HA-420 OSD FC HA-420; Rev.1 OSD FC HA-420: Rev.2 OSD FC HA-420: Rev 3
	HA-420 (HondaJet Elite)						
Israel Aircraft Industry	IAI -1121 Jetcommander -1123 Commodore Jet -1124 Westwind	IAI1121/23/24	X	X	MP	—	
	IAI -1125 Astra	IAI1125	—	X	MP	—	
Junkers	Junkers 52	JU52	—	X	MP	—	Considered as aircraft referred to in Annex II to Regulation (EC) No 216/2008
Learjet (Bombardier)	Learjet -20 series	Learjet20/30	X	X	MP	—	
	-30 series						
Learjet (Bombardier)	45 (Learjet 40 series, LR-40) 45 (Learjet 45 series, LR-45)	Learjet45/75	X	X	MP	X	OSD FC Learjet LR-40/LR-45/LR-70/LR-75
	75 (Learjet 70 series, LR-70) 75 (Learjet 75 series, LR-75)						
Learjet (Bombardier)	Learjet -55 series	Learjet55	—	X	MP	—	
Learjet (Bombardier)	Model 60 (Learjet 60 series)	Learjet60	X	X	MP	X	OE GM (OEB report Learjet60/60XR, dated 8 August 2007)
	LJ 60XR (Learjet-60 XR)						
Aircraft Industries, a.s	L-410 M Turbolet L-410 UVP – Turbolet L-410 UVP-E L 410 UVP-E9 L 410 UVP-LW L 410 UVP-E-LW L 410 UVP-E20 L 410 UVP-E20 CARGO L-420	L-410	—	X	MP	—	
Lockheed	L188 Electra series A	L188 Electra	X	X	MP	—	
	L188 Electra series C						
Lockheed	L382 G (C 130)	Hercules	—	X	MP	—	
Lockheed	L1011 Series	L1011	—	X	MP	—	
Lockheed	L1329	Jetstar	—	X	MP	—	

Lockheed	Constellation Series	L1049	—	X	MP	—	
MBB	HFB 320	HFB320	—	X	MP	—	
MBB	VFW 614	VFW-614	—	X	MP	—	
McDonnell Douglas	Douglas A-26B	DCA26	—	X	MP	—	
McDonnell Douglas	DC-3A-S1C3G DC-3C-SC3G	DC3	—	X	MP	—	Considered as aircraft referred to in Annex II to Regulation (EC) No 216/2008 Licensing and operational credits between models have not been evaluated and are subject to NAA assessment.
McDonnell Douglas	DC4	DC4	—	X	MP	—	
McDonnell Douglas	DC6 series	DC6	—	X	MP	—	
McDonnell Douglas	DC7C	DC7	—	X	MP	—	
McDonnell Douglas / Boeing	DC8 -33 -50, 60, 70 series	DC8	X	X	MP	—	
McDonnell Douglas / Boeing	DC9 10-50 series	DC9 10-50	—	X	MP	—	
McDonnell Douglas / Boeing	DC9 80 series MD 88 series MD 90 series	DC9 80/MD88/ MD90	X	X	MP	—	
McDonnell Douglas / Boeing	DC 10 series	DC 10	—	X	MP	—	
McDonnell Douglas / Boeing	MD 11	MD 11	—	X	MP	—	
Mitsubishi	MU 2B series	MU2B	—	X	SP HPA	—	
Pacific Aerospace Corporation	PAC750XL	PAC750XL SET	—	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
Piaggio Aero Industries S.p.A.	P166	Piaggio 166	—	X	SP	—	
Piaggio Aero Industries S.p.A.	P180 Avanti P180 Avanti II P180 Avanti EVO	Piaggio 180	X	X	SP HPA	X	OSD FC P180
Pilatus Britten	BN2T Turbine Islander BN2T - 4R MSSA BN2T - 4S Defender	BN2T	X	X	SP	—	
Pilatus	PC-6 (manual stabiliser trim) PC-6 (electrical stabiliser trim)	Pilatus PC6 SET	X	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
Pilatus	PC-7	Pilatus PC7 SET	—	—	SP	—	Class rating SET

							Class rating SET has been established by the JAA.
Pilatus	PC-7 MkII PC-9 PC-9 (M)	PC9/PC7MkII	X	—	SP HPA	—	

Pilatus	PC-12/47E (PC-12 NG)	Pilatus PC12 SET	X	—	SP HPA	X	Class rating SET
	PC-12 PC-12/45 PC-12/47 PC-12/41						
Pilatus	PC-24	PC-24	—	X	SP HPA	X	OSD FC PC-24 23 March 2018
Piper	PA-31 (Navajo, Navajo Chieftain, Mojave)	MEP (land)	—	—	SP	—	Class rating MEP (land)
Piper	PA-31T series (Cheyenne, Cheyenne II, Cheyenne IIXL)	PA31T/42	X	X	SP HPA	—	
	PA-42 series (Cheyenne III, Cheyenne IV)						
Piper	PA-46-310P (Malibu) PA-46-350P (Malibu Mirage) PA-46R-350T (Malibu Matrix)	SEP (land)		—	SP	—	Class rating SEP (land) for PA-46-310P (Malibu), PA-46-350P (Malibu Mirage), and PA-46R-350T (Malibu Matrix). Difference levels for the PA-46R-350T (Malibu Matrix) have not been evaluated. Differences training which is not further specified, was established by the JAA between the Piper PA-46-310P (Malibu)/PA-46-350P (Malibu Mirage) and the PA-46-500TP (Malibu Meridian) aircraft.
Piper	PA-46-500TP (Malibu Meridian)	PA-46 SET	X	—	SP HPA	X	Class rating SET for PA-46-500TP (Malibu Meridian), the Jetprop LLC Piper PA-46 (Jetprop DLX), and the PA-46-600TP (M600). The Piper PA-46-500TP (Malibu Meridian) and the Jetprop LLC Piper PA-46 (Jetprop DLX) aircraft have been evaluated as variants requiring familiarisation. OE GM (OEB report PA-46 Jetprop DLX / PA-46-500TP (Malibu Meridian), dated 28 June 2012.) The PA-46-600TP (M600) was assessed as variant for the license endorsement PA-46 SET, requiring differences training.
Jetprop LLC Piper (STC)	PA-46 Jetprop DLX						
Piper	PA-46-600TP (M600)						
PT Industry	IPTN CN 235-110	IPTNCN 235	—	X	MP	—	
PZL	M28 - 02-W	PZL-M28	X	X	MP	X	OSD FC PZL M28

(Polskie Zakłady Lotnicze)	- 05						
Quest Aircraft Design LLC	Kodiak 100 (land) Kodiak 100 (sea)	SET Kodiak 100	—	—	SP	—	Class rating SET Training levels between Quest Kodiak 100 SET land and sea aircraft have not been evaluated.
Rhein Flugzeugbau	FT 600	Rhein Flugzeugbau SET	—	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
Rockwell	AC 680T AC 690 series AC 900 series	Rockwell MET	X	X	SP HPA	—	
Rockwell International	NA-265 series	NA265	—	X	MP	—	
RUAG Aerospace Services GmbH	Dornier 228: 228-100 228-200 228-101 228-201 228-202 228-212 Dornier 228: 228-212 NG	D228	X	X	SP	X	OSD FC Dornier 228
Saab	SAAB SF340 series	SAAB340	—	X	MP	—	
Saab	SAAB 2000	SAAB2000	—	X	MP	—	
Short (Bombardier)	SC7 Skyvan	SC7Skyvan	—	X	SP	—	
Short Brothers (Bombardier)	SD3 - 30 - 60	SD3-30/60	X	X	MP	—	
Short Brothers (Bombardier)	SC5 Belfast	Belfast	—	X	MP	—	
SOCATA	TBM 700 A (TBM 700) TBM 700 B (TBM 700) TBM 700 C1 (TBM 700) TBM 700 C2 (TBM 700) TBM 700 N • TBM 850 TBM 700 N • TBM 850 G1000 TBM 700 N • TBM 900 TBM 700 N • TBM 910 TBM 700 N	TBM SET	X	—	SP HPA	X	Class rating SET OE GM - FC TBM 700, dated 18 Jan 2018

	• TBM 930						
SST Flugtechnik GmbH	EA 400 - Extra 400	SEP (land)	—	—	SP	X	OE GM (OEB report EA400/EA400-500, dated 11 December 2015) Class rating SEP(land)
SST Flugtechnik GmbH	EA 400-500 - Extra 500	Extra500 SET	—	—	SP		Class rating SET
Sukhoi Civil Aircraft	RRJ-95B (Superjet 100)	RRJ95	—	X	MP	X	OSD FC RRJ-95B
Swearingen / Fairchild	226 T 226 T(B)	SA226/227	X	X	SP HPA	—	
	226 AT 226 TC						
	227 TT						
	227 AC 227 AT 227 BC						
Thrush Aircraft Inc.	S2R turbo thrush	Snow/Ayres SET	—	—	SP	—	Class rating SET Class rating SET has been established by the JAA.
Viking Air Limited	DHC-6 (Twin Otter) Series 400	DHC6	X	X	SP	X	OSD FC DHC6
	DHC-6 (Twin Otter) Series 300						
	DHC-6 (Twin Otter) Series 200						DHC-6 series 100 and 200 have not been evaluated.
	DHC-6 (Twin Otter) Series 100						
Vickers-Armstrong	Vanguard	Vanguard	—	X	MP	—	
Vickers-Armstrong	Viscount	Viscount	—	X	MP	—	
Vulcanair S.p.A.	AP68TP-600 Viator	AP68TP-600	—	X	SP	X	OSD FC AP68TP-600
	AP68TP-300 ("Spartacus")	AP68TP-300	—	X	SP	—	
	SF600	SF600	—	X	SP	—	
	SF600A	SF600A	—	X	SP	—	

Table 2 – Type Rating and Licence Endorsement Helicopter

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Agusta Bell - SE Piston -	Agusta Bell 47G-2 Agusta Bell 47G-2A-1 Agusta Bell 47G-3B-1 Agusta Bell 47G-4 Agusta Bell 47G-4A Agusta Bell 47J Agusta Bell 47J-2 Agusta Bell 47J-3		Bell 47			
Agusta Bell - SE Turbine -	Agusta Bell 206 A Agusta Bell 206 B	(D)	Bell 206			
	Agusta Bell 206 L					
	Agusta Bell 204	(D)	Bell 204/205/UH-1D	X		
	Agusta Bell 205					
Agusta Bell - ME Turbine -	Agusta Bell 212	(D)	Bell 212/412	X		
	Agusta Bell 412 Agusta Bell 412 SP					
Leonardo - SE Turbine -	A119 –A119 IDS	(D)				For OSD_FC Data contact Pietro.Ferriello@leonardocompany.com
	AW119MKII (Ke)		A119		X	
	AW119MKII (Kx)					
Leonardo - ME Turbine -	A109 A A109 A II A109 C	(D)	A109			
	A109 K2					
	A109 LUH					
	AB139 / AW139		A139	X	X	For OSD_FC Data contact Pietro.Ferriello@leonardocompany.com
	AB139 & AW139 Phase 4 AW139 Phase 5 AW139 Phase 7	(D)	AW139	X	X	
	AW139 Phase 8					
	A109E	(D)	AW109		X	For OSD_FC Data contact Pietro.Ferriello@leonardocompany.com
	A109S					
	A109S Trekker					
	AW109SP					
	AW169		AW169	X	X	For OSD_FC Data contact Pietro.Ferriello@leonardocompany.com
	AW 189 phase 3 AW 189 phase 4 AW 189 phase 5		AW189	X	X	For OSD_FC Data contact Pietro.Ferriello@leonardocompany.com
Agusta Sikorsky - ME Turbine -	Agusta S-61 N 1		SK-61	X		

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Airbus Helicopters - SE Turbine -	SA 341 G -Gazelle SA 342 J -Gazelle		SA341/342			
	SA 3180 – Alouette II SA 318 B– Alouette II SA 318 C– Alouette II SA 3130 – Alouette II SA 313 B– Alouette II		SA318/SE313			
Airbus Helicopters - SE Turbine -	SE 3160 – Alouette III SE 316 B– Alouette III SE 316 C– Alouette III	(D)	SA316/319/315			
	SA 319 B – Alouette III					
	SA 315 B – Lama					
	SA 360 – Dauphin		SA360			
	SO 1221-Djinn		SO 1221			
	EC 120B- Colibri		EC120B		X	For OSD_FC Data contact alain.madec@airbus.com christophe.pozzo-di-borgo@airbus.com
	AS 350 (B, D, B1, B2, BA, BB) – Ecureuil	(D)	AS 350 / EC130		X	For OSD_FC Data contact alain.madec@airbus.com christophe.pozzo-di-borgo@airbus.com
	AS 350 B3) – Ecureuil					
	AS 350 B3 Arriel 2B1) – Ecureuil AS 350 B3e) – Ecureuil					
	EC 130 B4 – Ecureuil EC 130 T2 – Ecureuil					
Airbus Helicopters - ME Turbine -	SA 330 F - Puma SA 330 G- Puma SA 330 J - Puma		SA 330	X		
	AS 332 (C, C1, L, L1) – Super Puma	(D)	AS 332 / EC 225	X	X	For OSD_FC Data contact alain.madec@airbus.com christophe.pozzo-di-borgo@airbus.com
	AS 332 e (C1e, L1e) – Super Puma					
	AS 332 L2 – Super Puma					
	EC225 LP – Super Puma					
	EC175-B		EC175	X	X OSD Normal revision 1 dated 16/05/16	For OSD_FC Data contact alain.madec@airbus.com christophe.pozzo-di-borgo@airbus.com
	AS 355 E – Ecureuil AS 355 F – Ecureuil AS 355 F1– Ecureuil AS 355 F2– Ecureuil	(D)	AS355		X	For OSD_FC Data contact alain.madec@airbus.com christophe.pozzo-di-borgo@airbus.com
	AS 355 N – Ecureuil					
	AS 355 NP– Ecureuil					
	SA 365 C – Dauphin SA 365 C1– Dauphin SA 365 C2– Dauphin SA 365 C3– Dauphin		SA365 C	X		
	SA 365 N – Dauphin 2 SA 365 N1 – Dauphin 2 SA 365 N2 – Dauphin 2	(D)	S365 / EC155	X	X	For OSD_FC Data contact alain.madec@airbus.com christophe.pozzo-di-borgo@airbus.com

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
	SA 365 N3 – Dauphin 2					
	SA 365 N3+ – Dauphin 2					
	EC 155 B/B1					
Airbus Helicopters Deutschland GmbH - ME Turbine -	BO 105 A BO 105 C BO 105 D BO 105 LS A-1 BO 105 LSA-3 BO 105 S BO 105 CBS		BO 105			
Airbus Helicopters Deutschland GmbH - ME Turbine -	MBB-BK117 A-1 MBB-BK117 A-3 MBB-BK117 A-4 MBB-BK117 B-1 MBB-BK117 B-2	(D)	BK117	X		MBB-BK117A-1 is not considered as complex due to MTOM 2850Kg
	MBB-BK117 C-1					
Airbus Helicopters Deutschland GmbH - ME Turbine -	BK 117 C-2	(D)	EC145 (BK117)	X	X	For OSD_FC Data contact information.osd-airbushelicopters.ahd@airbus.com
	BK 117 C-2e					
	BK 117 D-2 BK117D-2M					
	EC 135 P1 CDS /CPDS EC 135 P2 EC 135 P2+ EC 635 P2+	(D)	EC135/635		X	For OSD_FC Data contact information.osd-airbushelicopters.ahd@airbus.com
	EC 135 P3 EC 635 P3					
	EC 135 P3H					
	EC 135 T1 CDS/ CPDS EC 635 T1 EC 135 T2 EC 135 T2+ EC 635 T2+					
	EC 135 T3 EC 635 T3					
	EC 135 T3H					

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Bell Helicopters - SE Piston -	Bell 47 D Bell 47 G Bell 47 G-1 Bell 47 G-2 Bell 47 G-3 B-1 Bell 47 G-4 Bell 47 G-4A Bell 47 G-5 Bell 47 H-1 Bell 47 J Bell 47 J-2 Bell 47 J-2 A		Bell 47			
Bell Helicopters - SE Turbine -	Bell 47 T		Bell 47 T			
	Bell 47 T A					
	Bell 204	(D)	Bell 204/205/UH-1D	X		
	Bell 205 A-1					
	Bell UH-1D Bell UH-1H					
	Bell 206 A Bell 206 B Bell 206 B 2 Bell 206 B 3	(D)	Bell 206			
	Bell 206 L Bell 206 L-1 Bell 206 L-3 Bell 206 L-4				X	For OSD_FC Data contact pselight@bh.com
	Bell 407	(D)	Bell 407		X	For OSD_FC Data contact pselight@bh.com BHT-407-EASA-FCD dated 16/11/18 Rev.1
	Bell 407GX					
	Bell 407GXi					
	Bell 214 B Bell 214 B 1		Bell 214	X		
	Bell 505		Bell 505		X	BHT-505-EASA-FCD dated 09/09/17
Bell Helicopters - ME Turbine -	Bell 206 LT Twin ranger		Bell 206 LT			
	Bell 212	(D)	Bell 212/412	X	X	For OSD_FC Data contact psemedium@bh.com
	Bell 412 Bell 412 SP Bell 412 HP Bell 412 EP					
	Bell 412 EPI					
	Bell 214 ST		Bell 214 ST	X		
Bell Helicopters - ME Turbine –	Bell 222 Bell 222 A Bell 222 B Bell 222 UT Bell 222 SP	(D)	Bell 222/230/430	X		
	Bell 230					
	Bell 430					
	Bell 427		Bell 427			

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Bell Helicopters - ME Turbine -	Bell 429		Bell 429		X	For OSD_FC Data contact pseinter@bh.com
Brantly - SE Piston -	B-2 B-2B		Brantley B2			
Breda Nardi - SE Piston -	Breda Nardi 269		HU 269			
Breda Nardi - SE Turbine -	Breda Nardi 369		HU 369/ MD500N / 600N			Difference training necessary to fly the Mc Donnell Douglas
Bristol Aircraft - SE Piston -	B-171-B		Bristol 171 B			
Leonardo - ME Turbine -	EH101-510		EH101	X		
Enstrom - SE Piston -	F-28A F-28C F-28C-2 F-28F F-28F-R 280 280C 280F 280FX		ENF 28		X	For OSD_FC Data contact engineering@enstromhelicopter.com
Enstrom - SE Turbine -	480 480B		ENF 480		X	For OSD_FC Data contact engineering@enstromhelicopter.com
Erickson Air-Crane Incorporated - ME Turbine -	S 64 F		S 64 F	X		
Hélicoptères Guimbal - SE Piston -	Cabri G2		Cabri G2		X	For OSD_FC Data contact support@guimbal.com
Hiller - SE Piston -	UH 12 A UH 12 B UH 12 E		UH 12			
Hiller - SE Turbine -	UH 12 T		UH 12 T			
Hughes / Schweitzer - SE Piston -	269 A 269 B 269 C 300 C 300 CB 300 CB i		HU 269			

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Hughes / Schweitzer - SE Turbine -	330 SP 333		SC 330			
Kaman - SE Turbine -	Kaman K 1200		K 1200			
McDonnell Douglas Helicopters - SE Turbine -	Hughes 369 D Hughes 369 E Hughes 369 FF Hughes 369 HE Hughes 369 HS	(D)	HU369 / MD500N / 600N			
	MD 500 N (NOTAR) MD 520 N AMD500N					
	MD 600 N					
McDonnell Douglas Helicopters - ME Turbine -	MD 900	(D)	MD 900 / 902			
	MD 902					
Ministry of Aviation Industry of Russia -ME Piston-	Kamov KA 26 D		KA 26 D	X		
Ministry of Aviation Industry of Russia -ME Turbine-	Kamov KA 32 A		KA 32	X		
	MIL Mi-8 MIL Mi 17 MIL Mi 171 MIL Mi 172		Mi 8	X		
P.Z.L Swidnik, Poland - SE Turbine -	PZL SW-4		SW-4			
P.Z.L Swidnik, Poland - ME Turbine -	MIL Mi-2		Mi 2	X		
	PZL KANIA		KANIA	X		
	PZL W-3	(D)	W-3 SOKOL	X	X	For OSD_FC Data contact PL-CustomerSupport@AgustaWestland.com PL-CustomerSupport@finmeccanica.com
	PZL W-3A					
Robinson - SE Piston -	R 22 R 22 A R 22 B		R 22		X	OSD_FC Data available @ TC holders website: www.robinsonheli.com
	R 44 R 44 Raven R 44 Raven II		R 44		X	OSD_FC Data available @ TC holders website: www.robinsonheli.com
Robinson - SE Turbine -	R 66		R 66		X	OSD_FC Data available @ TC holders website: www.robinsonheli.com

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Sikorsky - SE Piston -	S 55		S 55	X		
Sikorsky - ME Turbine -	S 58		S 58	X		
	S 76 A S 76 A+ S 76 A++	(D)	SK 76	X	X	
	S 76 B					
	S 76 C					
	S76D	(D)	S76		X	For OSD_FC Data contact Dave.J.Carew@lmco.com sikorskywcs@sikorsky.com
	S76C+ S76 C++					
	S-61 N S-61 S		SK 61	X		
	S-92 A		SK 92	X	X	For OSD_FC Data contact Dave.J.Carew@lmco.com sikorskywcs@sikorsky.com
Silvercraft - SE Piston -	SV 4		SV 4			
Westland - SE Piston -	Westland Bell 47 G3 B-1		Bell 47			
Westland Helicopters - SE Piston -	Westland S 55 Series 1	(D)	WHS 55	X		
Westland Helicopters - SE Turbine -	Westland S 55 Series 3					

7.10 Appendix 10 - Conditions for The Acceptance of Licences Issued by or on Behalf of Contracting States

(Chapter 1, 1.2.2 refers)

Validation Of Licences

Flight Crew

General

1. A pilot licence issued in compliance with the requirements of Annex 1 to the Chicago Convention by a Contracting State may be validated by the CAAM.

2.

a) The period of validation of a licence shall not exceed 6 months and renewable, provided that the basic licence remains valid.

b) The holders of a licence accepted by CAAM shall exercise their privileges in accordance with the requirements stated in this CAD.

c) The privileges of the validation are always conditional of the continuing validity of the supporting licence and may not exceed the privileges of the supporting licence.

d) Prior to issuance of validation, the pilots shall sit and pass for Air Law I, Air Law 2, Operational Procedures and type technical examinations except for validation issued for less than one month.

3. A Certificate of Validation may be issued to any of the following persons:

a) A visiting pilot who wishes to carry out non-commercial flights in a Malaysian registered aircraft for a short duration.

b) The holder of a valid foreign professional pilot's licence employed by a Malaysian Air Operator.

c) The holder of a valid foreign professional pilot's licence carrying out an overseas ferry/delivery flight on behalf of Malaysian Air Operator.

d) A DFE who is holder of a valid foreign professional pilot's licence to carry out flight test on behalf of CAAM for an aircraft type rating endorsement.

Note.- Malaysian Air Operator includes any AOC holder, ATO or flying organisations registered in Malaysia.

4. An FI Rating endorsed in a foreign licence may not be issued with a Certificate of Validation unless the applicant passes a practical flight test by a CAAM DFE.

5. The holder of any expired pilot's licence is not eligible to apply for the Certificate of Validation.

6. For the purpose of applying for a Certificate of Validation, a foreign professional pilot’s licence holder must meet the following requirements:

a) holds a valid Medical Certificate,

b) holds a valid Radio telephony Operator's licence,

c) holds a valid Certificate of Test/Aircraft Rating,

d) holds a valid Instrument Rating (if applicable),

e) Holds a valid Instructor's Rating (if applicable),

f) Obtains licence authentication from country of issue,

g) Clear security vetting by relevant authority.

h) A letter of sponsor by Malaysian Air Operator.

7. CAAM may impose limitation on the Certificate of Validation, if necessary.

8. The above Certificates/Ratings must be issued by a single licensing authority.

9. CAAM shall reject the application if the applicant is not proficient in English language.

7.11 Appendix 11 – Flight Instructors

(Chapter 2, 2.8 refers)

1 Flight instructor nominee qualifications (initial issue)

a) For the nomination of any type of FI, an applicant shall have fulfilled the requirements as laid down in 2.8.1 in CAD1, as well as those outlined in the CAAM approved manual of the company.

b) FI shall have not been subject to any sanctions, including the suspension, limitation or revocation of any of their licences, ratings, or certificates issued, for non-compliance with regulations, during the last 3 years.

c) For the nomination of FI (3) (FSTD only), an applicant shall hold or have held a type and/or rating for the applicable type of aircraft. No special medical category is required for this applicant.

1.1 The FI (1) nominee, in addition to para 1 (a), shall:

a) hold a valid CPL or ATPL with a valid instrument rating (as applicable) endorsed for type as PIC which would allow the applicant to fly commercially on the same type of aircraft as requested in the application;

b) demonstrate flying proficiency in the type to which the nominee seeks instructional duty being sought;

c) have been employed as PIC in the same company for which instructional duty being sought;

d) demonstrate satisfactory knowledge of the contents and interpretation of the following publications:

1) MCAR 2016
2) CAD 1

e) demonstrate thorough knowledge of the organisation's operations manual, operating specifications, SOPs and applicable aircraft flight and operating manuals;

f) demonstrate knowledge and ability to conduct on a suitable candidate instructional duty as required and as appropriate on the aircraft or simulator type on which the FI has been nominated. Such demonstrations shall be monitored and assessed by an Inspector;

g) for aeroplanes:

1) have completed 500 hours as pilot-in-command on aircraft type for which the FI(1) rating is sought;

2) have completed, within the 12 months preceding the date of application, 30 route sectors, including take-offs and landings, as pilot-in-command on the applicable aeroplane type, of which 15 sectors may be completed in an FFS representing that type; and

3) have completed at least 800 hours of flight time under IFR, of which at least 400 hours shall be in aeroplanes

h) for helicopters:

1) for single-pilot single-engine helicopters, have completed 250 hours as a pilot on helicopters;

2) for single-pilot multi-engine helicopters, have completed 500 hours as pilot of helicopters, including 100 hours as pilot-in-command on single-pilot multi- engine helicopters;

3) for multi-pilot helicopters, have completed 1 000 hours of flight time as a pilot on helicopters, including:

i) 350 hours as a pilot on multi-pilot helicopters; or
ii) for applicants already holding a FI (1) certificate for single-pilot multi- engine helicopters, 100 hours as pilot of that type in multi-pilot operations.

4) have completed at least 500 hours of flight time under IFR, of which at least 250 hours shall be instrument flight time in helicopters; and

1.2 The FI (2) nominee, in addition to para 1 (a), shall:

a) hold a valid CPL with an instrument rating (as applicable) endorsed or a valid ATPL, and meet the following requirement:

1) for single-pilot single-engine aeroplane:

i) 300 hours flight time as a pilot on aeroplanes;
ii) 30 hours as pilot-in-command on the applicable class or type of aeroplane.

2) for single-pilot multi engine aeroplane:

i) 500 hours flight time as a pilot on aeroplanes;
ii) 30 hours as pilot-in-command on the applicable class or type of aeroplane.

3) for helicopters;

i) 250 hours flight time as pilot on helicopters
ii) 100 hours as pilot-in-command on the applicable class or type of helicopter.

b) hold at least a valid PPL and have:

1) met the requirements of at least CPL theoretical knowledge; and

i) Completed at least 200 hours of flight time on aeroplanes, of which 150 hours as pilot-in-command.
ii) Completed at least 250 hours of flight time on helicopters, of which 200 hours as pilot-in-command.

c) demonstrate flying proficiency in the class or type to which instructional duty is being sought;

d) must be employed by the same company for which instructional duty is sought;

e) demonstrate satisfactory knowledge of the contents and interpretation of the following publications:

1) MCAR 2016
2) CAD 1

f) demonstrate thorough knowledge of the organisation's operations manual, operating specifications, SOPs and applicable aircraft flight and operating manuals;

g) demonstrate knowledge and ability to conduct on a suitable candidate instructional duty as required and as appropriate, on the aircraft or simulator class or type, as applicable, on which the FI has been nominated. Such demonstrations shall be monitored and assessed by an Inspector.

h) have received at least 10 hours of instrument flight instruction on the appropriate aircraft category, of which not more than 5 hours may be instrument ground time in an FSTD.

i) have completed 20 hours of VFR cross-country flight on the appropriate aircraft category as PIC.

1.2.1 The AFI nominee, in addition to para 1 (a), shall:

a) hold at least a valid PPL, as required, with the following requirements:

1) completed at least 200 hours of flight time in aeroplanes;
2) completed at least 150 hours of flight time in helicopters.

b) demonstrate flying proficiency, in the class or type to which instructional duty is being sought;

c) must be employed by the same company for which instructional duty is sought;

d) demonstrate satisfactory knowledge of the contents and interpretation of the following publications:

1) MCAR 2016
2) CAD 1

e) demonstrate thorough knowledge of the organisation's operations manual, operating specifications, SOPs and applicable aircraft flight and operating manuals;

f) demonstrate knowledge and ability to conduct on a suitable candidate instructional duty as required and as appropriate, on the aircraft or simulator class or type, as applicable, on which the AFI has been nominated.

g) have received at least 10 hours of instrument flight instruction on the appropriate aircraft category, of which not more than 5 hours may be instrument ground time in an FSTD.

h) have completed 20 hours of VFR cross-country flight on the appropriate aircraft category as PIC.

1.3 The FI (3) nominee, in addition to para 1 (a) and (c), shall:

a) for aeroplanes,

1) hold or have held a CPL or ATPL with the instrument rating endorsed on type.

2) completed, as a pilot or as an observer, within the 12 months preceding the application, at least:

i) 3 route sectors on the flight deck of the applicable aircraft type; or

ii) 2 line-orientated flight training-based simulator sessions conducted by qualified flight crew on the flight deck of the applicable type. These simulator sessions shall include 2 flights of at least 2 hours each between 2 different aerodromes, and the associated pre-flight planning and de-briefing.

3) have completed at least 800 hours of flight time under IFR, of which at least 400 hours shall be in aeroplanes

b) for helicopters,

1) for helicopters, hold or have held a CPL or ATPL with the instrument rating (if applicable) endorsed on type.

2) completed, as a pilot or as an observer, at least 1 hour of flight time on the flight deck of the applicable type, within the 12 months preceding the application; and

3) in the case of multi-pilot helicopters, at least 1 000 hours of flying experience as a pilot on helicopters, including at least 350 hours as a pilot on multi-pilot helicopters;

4) in the case of single-pilot multi-engine helicopters, completed 500 hours as pilot of helicopters, including 100 hours as PIC on single-pilot multi- engine helicopters;

5) in the case of single-pilot single-engine helicopters, completed 250 hours as a pilot on helicopters; and

6) have completed at least 500 hours of flight time under IFR, of which at least 250 hours shall be instrument flight time in helicopters.

c) have completed the proficiency check for the issue of the specific aircraft type rating in an FFS representing the applicable type, within the 12 months preceding the application;

d) demonstrate handling proficiency in a simulator type in which checking authority is being sought;

e) demonstrate satisfactory knowledge of the contents and interpretation of the following publications:

1) MCAR 2016
2) CAD 1

f) demonstrate knowledge and ability to conduct on a suitable candidate instructional duty as required and as appropriate, on the aircraft or simulator class or type, as applicable, on which the FI has been nominated. Such demonstrations shall be monitored and assessed by an Inspector.

1.4 Additional requirements for instructors for the MPL

a) Instructors conducting training for the MPL shall:

1) have successfully completed an MPL instructor training course at an ATO; and

2) additionally, for the basic, intermediate and advanced phases of the MPL integrated training course:

i) be experienced in multi-pilot operations; and
ii) have completed initial crew resource management training with a CAT operator approved in accordance with the applicable air operations requirements.

b) MPL instructors training course

1) The MPL instructor training course shall comprise at least 14 hours of training. Upon completion of the training course, the applicant shall undertake an assessment of instructor competencies and of knowledge of the competency- based approach to training.

2) The assessment shall consist of a practical demonstration of flight instruction in the appropriate phase of the MPL training course. This assessment shall be conducted by an examiner who is qualified in accordance with CAD 1006 - DFE.

3) Upon successful completion of the MPL training course, the ATO shall issue an MPL instructor qualification certificate to the applicant.

c) In order to maintain the privileges, the instructor shall have, within the preceding 12 months, conducted within an MPL training course:

1) 1 simulator session of at least 3 hours; or

2) 1 air exercise of at least 1-hour comprising at least 2 take-offs and landings.

d) If the instructor has not fulfilled the requirements of paragraph (c), before exercising the privileges to conduct flight instruction for the MPL he shall:

1) receive refresher training at an ATO to reach the level of competence necessary to pass the assessment of instructor competencies; and

2) pass the assessment of instructor competencies as set out in paragraph (b)(2) above.

e) Specific requirements for the MPL course. To instruct for the basic phase of training on an MPL course, the FI (2) or FI (3) shall:

1) hold an IR for multi-engine aeroplanes; and

2) have completed at least 1 500 hours of flight time in multi-crew operations.

1.5 Additional requirements for instructing in a training course in accordance with Appendix 12 – UPRT Course:

a) Before acting as instructors for a training course according to Appendix 12 – UPRT Course, holders of an instructor certificate shall:

1) have at least 500 hours of flight time as pilots of aeroplanes, including 200 hours of flight instruction;

2) after complying with the experience requirements in paragraph 1.5 (a)(1) above, have completed a UPRT instructor training course, during which the competence of applicants shall have been assessed continuously; and

3) upon completion of the course, have been issued with a certificate of course completion, whose Head of Training shall have entered the privileges specified in paragraph 1.5(a) in the logbook of the applicants.

b) The privileges referred to in paragraph 1.5(a) shall only be exercised if instructors have, during the last year, received refresher training during which the competence required to instruct on a course in accordance with paragraph Appendix 12 – UPRT Course is assessed to the satisfaction of the Head of Training.

c) Instructors holding the privileges specified in paragraph 1.5(a) may act as instructors for a course as specified in paragraph 1.5(a)(2), provided that they:

1) have 25 hours of flight instruction experience during training according to Appendix 12 – UPRT Course;

2) have completed an assessment of competence for this privilege; and

3) comply with the recency requirements in paragraph 1.5(b).

d) These privileges shall be entered in the logbook of the instructors and signed by the examiner.

2 Validity and renewal requirements

2.1 A Flight Instructor certificate is valid for three (3) years expiring on the last day of the month. If the flight instructor fulfils the renewal requirement within the last 12 months preceding the expiry date of the certificate, the new period of validity shall be three (3) years after the previous expiry date of the certificate, expiring at the end of the month.

2.2 Flight Instructor should note that instructional duty may only be exercised when the corresponding instructor qualification is valid.

Note. – If the Assessment of Competence is conducted within the final 3 months of the validity, the period of validity shall extend form the date of issue until 3 years after the expiry date of the previous validity. If the Assessment of Competence is conducted outside the 3 month window, the expiry date will be at the end of the month of which the Assessment of Competence is done, 3 years later.

2.3 FI (1) Renewal:

a) Aeroplanes. For renewal of a FI certificate, the applicant shall, within the last 12 months preceding the expiry date of the certificate, fulfil two of the following 3 requirements:

1) conduct one of the following parts of a complete type rating training course: simulator session of at least 3 hours or one air exercise of at least 1 hour comprising a minimum of 2 take-offs and landings;

2) receive instructor refresher training as a FI;

3) within the last 3 months preceding the expiry date of the certificate, pass the assessment of competence in accordance with Appendix 11 paragraph 3.2.

b) Helicopters. For renewal of a FI certificate, the applicant shall, within the validity period of the FI certificate, fulfil 2 of the following 3 requirements:

1) complete 50 hours of flight instruction on each of the types of aircraft for which instructional privileges are held or in an FSTD representing those types, of which at least 15 hours shall be within the 12 months preceding the expiry date of the FI certificate.

FI helicopters time flown as FI or as any kind of examiner shall also be relevant for this purpose;

2) receive instructor refresher training as a FI;

3) within the last 3 months preceding the expiry date of the certificate, pass the assessment of competence in accordance with Appendix 11 paragraph 3.2.

c) For at least each alternate renewal of a FI certificate, the holder shall have to pass the assessment of competence in accordance with Appendix 11 paragraph 3.2.

d) If a person holds a FI certificate on more than one type of aircraft within the same category, the assessment of competence taken on one of those types shall renew the FI certificate for the other types held within the same category of aircraft.

e) Specific requirements for renewal of a FI (1) helicopter. A FI (1) holding a FI (2) helicopter certificate on the relevant type shall have full credit towards the requirements in 2.3 above. In this case, the FI (1) certificate will be valid until the expiry date of the FI (2) certificate.

2.4 FI (1) Renewal after expiry:

a) Aeroplanes. If the FI certificate has lapsed the applicant shall have:

1) completed within the last 12 months preceding the application at least 30 route sectors, to include take-offs and landings on the applicable aeroplane type, of which not more than 15 sectors may be completed in a flight simulator;

2) completed the relevant parts of the FI course; and

3) conducted on a complete type rating course at least 3 hours of flight instruction on the applicable type of aeroplane under the supervision of a FI (1).

b) Helicopters. If the certificate has lapsed, the applicant shall, within a period of 12 months before renewal:

1) receive instructor refresher training as a FI, which should cover the relevant elements of the FI training course; and

2) pass the assessment of competence in accordance with Appendix 11 paragraph 3.2 in each of the types of aircraft in which renewal of the instructional privileges is sought.

2.5 FI (2) Renewal:

a) For renewal of an FI certificate, the holder shall fulfil 2 of the following 3 requirements:

1) at least 50 hours of flight instruction in the appropriate aircraft category during the period of validity of the FI certificate. If the privileges to instruct for the IR are to be renewed, 10 of these hours shall be flight instruction for an IR and shall have been completed within the last 12 months preceding the expiry date of the FI certificate;

2) attend an instructor refresher seminar, within the validity period of the FI certificate;

3) pass an assessment of competence in accordance with Appendix 11 paragraph 3.2, within the 3 months preceding the expiry date of the FI certificate.

b) For at least each alternate subsequent renewal in the case of FI(A) or FI(H), the holder shall have to pass an assessment of competence in accordance with Appendix 11 paragraph 3.2.

2.5.1 AFI Renewal:

a) For renewal of an AFI certificate, the holder shall fulfil 2 of the following 3 requirements:

1) at least 50 hours of flight instruction in the appropriate aircraft category during the period of validity of the AFI certificate;
2) attend an instructor refresher seminar, within the validity period of the AFI certificate;
3) pass an assessment of competence in accordance with Appendix 11 paragraph 3.2, within the 3 months preceding the expiry date of the FI certificate.

b) For at least each alternate subsequent renewal in the case of AFI(A) or AFI(H), the holder shall have to pass an assessment of competence in accordance with Appendix 11 paragraph 3.2.

2.6 FI (2) Renewal after expiry:

a) Renewal. If the FI certificate has lapsed, the applicant shall, within a period of 12 months before renewal:

1) attend an instructor refresher seminar; and

2) pass an assessment of competence in accordance with Appendix 11 paragraph 3.2.

2.6.1 AFI Renewal after expiry:

a) Renewal. If the AFI certificate has lapsed, the applicant shall, within a period of 12 months before renewal:

1) attend an instructor refresher seminar; and
2) pass an assessment of competence in accordance with Appendix 11 paragraph 3.2.

2.7 FI (3) Renewal:

a) For renewal of an FI certificate the applicant shall, within the validity period of the FI certificate, fulfil 2 of the following 3 requirements:

1) complete 50 hours as an instructor or an examiner in FSTDs, of which at least 15 hours shall be within the 12 months preceding the expiry date of the FI certificate;

2) receive instructor refresher training as an FI;

3) within the 3 months preceding the expiry date of the FI certificate, pass the relevant sections of the assessment of competence in accordance with Appendix 11 paragraph 3.2.

b) Additionally, the applicant shall have completed, on an FFS, the proficiency checks for the issue of the specific aircraft type ratings representing the types for which privileges are held.

c) For at least each alternate renewal of an FI certificate, the holder shall have to comply with the requirement of paragraph (a)(3).

2.8 FI (3) Renewal after expiry

a) Renewal. If the FI certificate has lapsed, the applicant shall, within the 12 months preceding the application:

1) complete the simulator content of the FI training course; and

2) fulfil the requirements specified in paragraph 2.7 (a)(2) and (3).

3 Training

3.1 Applicants for an FI certificate shall have completed a course of theoretical knowledge and flight instruction. In addition to the specific elements prescribed in this CAD for each category of instructor, the course shall contain the elements required in 2.8.1.1 of this CAD.

3.2 Assessment of competence

3.2.1 An applicant for the issuance of an FI certificate shall pass an assessment of competence in the appropriate aircraft class, type or FSTD, to demonstrate to an examiner who is qualified in accordance with CAD 1006 - DFE the ability to instruct a student pilot to the level required for the issue of the relevant licence, rating or certificate.

3.2.2 This assessment shall include:

a) the demonstration of the competencies described in 2.8.1.1 of this CAD, during pre-flight, post-flight and theoretical knowledge instruction;

b) oral theoretical examinations on the ground, pre-flight and post-flight briefings and in-flight demonstrations in the appropriate aircraft class, type or FSTD; and

c) exercises adequate to evaluate the instructor’s competencies.

3.2.3 The assessment shall be performed on the same class or type of aircraft or FSTD used for the flight instruction.

3.2.4 When an assessment of competence is required for renewal of an instructor certificate, an applicant who fails to achieve a pass in the assessment before the expiry date of an instructor certificate shall not exercise the privileges of that certificate until the assessment has successfully been completed.

3.3 FI (1)

3.3.1 In addition to 3.1 and 3.2 above, the FI training course shall include, at least:

a) 25 hours of teaching and learning;

b) 10 hours of technical training, including revision of technical knowledge, the preparation of lesson plans and the development of classroom/ simulator instructional skills;

c) 5 hours of flight instruction on the appropriate aircraft or a simulator representing that aircraft for single-pilot aircraft and 10 hours for multi- pilot aircraft or a simulator representing that aircraft.

3.3.2 Applicants holding or having held an instructor certificate shall be fully credited towards the requirement of 3.3.1 (a) above.

3.4 FI (2)

3.4.1 In addition to 3.1 and 3.2 above, the FI training course shall include:

a) 25 hours of teaching and learning;

b) And;

1) in the case of aeroplanes and helicopters, at least 100 hours of theoretical knowledge instruction, including progress tests;

2) in the case of balloons, at least 30 hours of theoretical knowledge instruction, including progress tests;

c) and;

1) in the case of aeroplanes and helicopters, at least 30 hours of flight instruction, of which 25 hours shall be dual flight instruction, of which 5 hours may be conducted in an FFS, an FNPT I or II or an FTD 2/3;

2) in the case of balloons, at least 3 hours of flight instruction, including 3 take-offs.

d) When applying for an FI certificate in another category of aircraft, pilots holding or having held an instructor certificate in aeroplanes and helicopters shall be credited with 55 hours towards the requirement in paragraph 3.4.1 (b)(1) or with 18 hours towards the requirements in paragraph 3.4.1 (b)(2).

3.5 FI (3)

3.5.1 In addition to 3.1 and 3.2 above,

a) The training course for the FI (3) shall include:

1) the FSTD content of the applicable type rating course;

2) the content of the instructor training course.

b) An applicant for an FI (3) certificate who holds a FI (1) certificate for the relevant type shall be fully credited towards the requirements of this paragraph.

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7.12 Appendix 12 - Specific requirements for the aeroplane and helicopter category

(Chapter 2, 2.1.5.11 refers)

1 Experience requirements and prerequisites for the issue of class or type ratings — aeroplanes

1.1 Unless otherwise determined in the operational suitability data established in accordance with Initial Airworthiness, an applicant for a class or type rating shall comply with the following experience requirements and prerequisites for the issue of the relevant rating:

a) Single-pilot multi-engine aeroplanes. An applicant for a first class or type rating on a single- pilot multi-engine aeroplane shall have completed at least 70 hours as PIC on aeroplanes.

b) Single-pilot high performance non-complex aeroplanes. Before starting flight training, an applicant for a first class or type rating for a single-pilot aeroplane classified as a high performance aeroplane shall:

1) have at least 200 hours of total flying experience, of which 70 hours as PIC on aeroplanes; and

2) comply with one of the following requirements:

i) attend related theoretical knowledge on aircraft type undertaken at an ATO; or

ii) have passed the ATPL theoretical knowledge examinations in accordance with this CAD; or

iii) hold, in addition to a licence issued in accordance with this CAD, an ATPL or CPL/IR with theoretical knowledge credit for ATPL, issued in accordance with Annex 1 to the Chicago Convention.

3) in addition, pilots seeking the privilege to operate the aeroplane in multi-pilot operations shall meet the requirements of paragraph (d)(4).

c) Single-pilot high performance complex aeroplanes. Applicants for the issue of a first type rating for a complex single-pilot aeroplane classified as a high performance aeroplane shall, in addition to meeting the requirements of paragraph (b), have fulfilled the requirements for a multi-engine IR, as established in chapter 2.7.

d) Multi-pilot aeroplanes. An applicant for the first type rating course for a multi-pilot aeroplane shall be a student pilot currently undergoing training on an MPL training course or comply with the following requirements:

1) have at least 70 hours of flight experience as PIC on aeroplanes;

2) hold a multi-engine IR;

3) have passed the ATPL theoretical knowledge examinations in accordance with this CAD; and

4) except when the type rating course is combined with an MCC course:

i) hold a certificate of an MCC course in aeroplanes; or
ii) hold a certificate of MCC in helicopters and have more than 100 hours of flight experience as a pilot on multi-pilot helicopters; or
iii) have at least 500 hours as a pilot on multi-pilot helicopters; or
iv) have at least 500 hours as a pilot in multi-pilot operations on single- pilot multi-engine aeroplanes, in CAT in accordance with the applicable air operations requirements.

e) The operator may grant a co-pilot the privilege to perform cruise relief duties on either pilot's seat above Flight Level 200 provided the co-pilot holds a valid type rating and a valid ATPL. This shall be documented in the operators operations manual.

f) Additional multi-pilot and single-pilot high performance complex aeroplane type ratings. An applicant for the issue of additional multi-pilot type ratings and single-pilot high performance complex aeroplanes type ratings shall hold a multi-engine IR.

g) When so determined in the operational suitability data established in accordance with Initial Airworthiness, the exercise of the privileges of a type rating may be initially limited to flight under the supervision of an instructor. The flight hours under supervision shall be entered in the pilot's logbook or equivalent record and signed by the instructor. The limitation shall be removed when the pilot demonstrates that the hours of flight under supervision required by the operational suitability data have been completed.

2 Theoretical knowledge and flight instruction for the issue of class and type ratings — aeroplanes

2.1 Unless otherwise determined in the operational suitability data established in accordance with Initial Airworthiness:

a) Single-pilot multi-engine aeroplanes.

1) The theoretical knowledge course for a single-pilot multi-engine class rating shall include at least 7 hours of instruction in multi-engine aeroplane operations.

2) The flight training course for a single-pilot multi-engine class or type rating shall include at least 2 hours and 30 minutes of dual flight instruction under normal conditions of multi-engine aeroplane operations, and not less than 3 hours 30 minutes of dual flight instruction in engine failure procedures and asymmetric flight techniques.

b) Single-pilot aeroplanes-sea. The training course for single-pilot aeroplane-sea ratings shall include theoretical knowledge and flight instruction. The flight training for a class or type rating-sea for single- pilot aeroplanes-sea shall include at least 8 hours of dual flight instruction if the applicant holds the land version of

the relevant class or type rating, or 10 hours if the applicant does not hold such a rating.

c) for single-pilot non-high-performance complex aeroplanes, single-pilot high-performance complex aeroplanes and multi-pilot aeroplanes, the training courses shall include UPRT theoretical knowledge and flight instruction related to the specificities of the relevant class or type.

3 Specific requirements for pilots undertaking a zero flight time type rating (ZFTT) course— aeroplanes

a) A pilot undertaking instruction at a ZFTT course shall have completed, on a multi-pilot turbo-jet aeroplane or on a multi-pilot turbo-prop aeroplane having a maximum certificated take-off mass of not less than 10 tonnes or a certificated passenger seating configuration of more than 19 passengers, at least:

1) if an FFS qualified to level CG, C or interim C is used during the course, 1 500 hours flight time or 250 route sectors;

2) if an FFS qualified to level DG or D is used during the course, 500 hours flight time or 100 route sectors.

b) When a pilot is changing from a turbo-prop to a turbo-jet aeroplane or from a turbo-jet to a turbo- prop aeroplane, additional simulator training shall be required.

4 Multi-crew cooperation training course — aeroplanes

a) the MCC training course shall comprise at least:

1) 25 hours of theoretical knowledge instruction and exercises; and

2) 20 hours of practical MCC training, or 15 hours in the case of student pilots attending an ATP integrated course.

An FNPT II MCC or an FFS shall be used. When the MCC training is combined with initial type rating training, the practical MCC training may be reduced to no less than 10 hours if the same FFS is used for both the MCC and type rating training.

b) The MCC training course shall be completed within 6 months at an ATO.

c) Unless the MCC course has been combined with a type rating course, on completion of the MCC training course the applicant shall be given a certificate of completion.

d) An applicant having completed MCC training for any other category of aircraft shall be exempted from the requirement in paragraph (a)(1).

5 Renewal of class and type ratings — aeroplanes

a) Renewal of multi-engine class ratings and type ratings. For renewal of multi-engine class ratings and type ratings, the applicant shall:

1) pass a proficiency check in accordance with Appendix 4 to this CAD in the relevant class or type of aeroplane or an FSTD representing that class or type. If the proficiency check is conducted within the final 3 months of validity, the period of validity shall extend form the date of issue until 12 calendar months after the expiry date of the previous proficiency check; and

2) complete during the period of validity of the rating, at least:

i) 10 route sectors as pilot of the relevant class or type of aeroplane; or

ii) 1 route sector as pilot of the relevant class or type of aeroplane or FFS, flown with an examiner. This route sector may be flown during the proficiency check.

3) A pilot working for a CAT operator approved in accordance with the applicable air operations requirements who has passed the operators proficiency check of the class or type rating shall be exempted from complying with the requirement in paragraph (2).

4) The renewal of an IR, if held, may be combined with a proficiency check for the renewal of a class or type rating.

b) Renewal of single-pilot single-engine class ratings.

1) Single-engine piston aeroplane class ratings. For renewal of single-pilot single-engine piston aeroplane class ratings the applicant shall:

i) within the 3 months preceding the expiry date of the rating, pass a proficiency check in the relevant class in accordance with Appendix 4 to this CAD with an examiner. The period of validity shall extend form the date of issue until 12 calendar months after the expiry date of the previous proficiency check; or

ii) within the 12 months preceding the expiry date of the rating, complete 12 hours of flight time in the relevant class, including:
(a) 6 hours as PIC,
(b) 12 take-offs and 12 landings, and
(c) refresher training of at least 1 hour of total flight time with a flight instructor (FI). Applicants shall be exempted from this refresher training if they have passed a class or type rating proficiency check, skill test or assessment of competence in any other class or type of aeroplane.

2) Notwithstanding paragraph 5(b)(1) above, AFI or FI (2) certificate holders shall pass a proficiency check in the relevant class in accordance with

Appendix 4 of this CAD with an examiner, within the 3 months preceding the expiry date of the rating.

3) Single-pilot single-engine turbo-prop aeroplanes. For renewal of single-engine turbo- prop class ratings applicants shall pass a proficiency check on the relevant class in accordance with Appendix 4 to this CAD with an examiner, within the 3 months preceding the expiry date of the rating. The period of validity shall extend form the date of issue until 12 calendar months after the expiry date of the previous proficiency check

4) When applicants hold both a single-engine piston aeroplane-land class rating and a single-engine piston aeroplane-sea class rating, they may complete the requirements of paragraph (1)(ii) in either class or a combination thereof and achieve the fulfilment of these requirements for both ratings. At least 1 hour of required PIC time and 6 of the required 12 take-offs and landings shall be completed in each class.

c) Applicants who fail to achieve a pass in all sections of a proficiency check before the expiry date of a class or type rating shall not exercise the privileges of that rating until a pass in the proficiency check has been achieved.

6 UPRT course

a) The UPRT course shall be completed at an ATO and shall comprise at least:

1) 5 hours of theoretical knowledge instruction;

2) preflight briefings and postflight debriefings; and

3) 3 hours of dual flight instruction with a flight instructor for aeroplanes qualified in accordance with paragraph 2.8.1 and consisting of UPRT in an aeroplane qualified for the training task.

b) Upon completion of the UPRT course, applicants shall be issued with a certificate of completion.

c) Course Objective and Content

1) The objective of the course is for the pilot under training:

i) to understand how to cope with the physiological and psychological aspects of dynamic upsets in aeroplanes; and
ii) to develop the necessary competence and resilience to be able to apply appropriate recovery techniques during upsets.

2) In order to meet the objective as specified in c) above, the course should:

i) emphasise physiological and psychological effects of an upset and develop strategies to mitigate those effects;
ii) be delivered in a suitable training aircraft in order to expose trainees to conditions that cannot be replicated in an FSTD; and

iii) employ recovery techniques that are suitable for the aircraft used for training in order to support the training objectives. In order to minimise the risk associated with potential negative transfer of training, the recovery techniques used during the course should be compatible with techniques typically used for transport category aeroplanes.

d) Theoretical Knowledge

1) Theoretical knowledge instruction supports the objectives of the course and should include the following:

i) a review of basic aerodynamics typically applicable to aeroplane upsets in transport category aeroplanes, including case studies of incidents involving potential or actual upsets.
ii) aerodynamics relevant to the aeroplane and exercises used in the practical training, including differences to aerodynamics as referred to in point (a);
iii) possible physiological and psychological effects of an upset, including surprise and startle effect;
iv) strategies to develop resilience and mitigate startle effect; and
v) memorising the appropriate procedures and techniques for upset recovery.

e) Flight Instruction

1) Flight instruction should include:

Exercises to demonstrate:

i) the relationship between speed, attitude and AoA;
ii) the effect of g-load on aeroplane performance, including stall events at different attitudes and airspeeds;
iii) aerodynamic indications of a stall including buffeting, loss of control authority and inability to arrest a descent;
iv) the physiological effects of different g-loads between -1 and 2.5G; and
v) surprise and the startle effect;

2) training in techniques to recover from:

i) nose high at various bank angles;
ii) nose low at various bank angles;
iii) spiral dives;
iv) stall events; and
v) incipient spin; and

3) training to develop resilience and to employ strategies to mitigate the startle effect.

f) Course Completion

1) The course is considered to have been satisfactorily completed if the trainee is able to successfully:

i) apply strategies to mitigate psychological and physical effects;
ii) recognise upsets;
iii) apply correct recovery techniques from upset scenarios as specified in point e)2).

7 Experience requirements and prerequisites for the issue of type ratings — helicopters

7.1 Unless otherwise determined in the operational suitability data established in accordance with Initial Airworthiness, an applicant for the issue of the first helicopter type rating shall comply with the following experience requirements and prerequisites for the issue of the relevant rating:

a) Multi-pilot helicopters. An applicant for the first type rating course for a multi-pilot helicopter type shall:

1) have at least 70 hours as PIC on helicopters;

2) except when the type rating course is combined with an MCC course:

i) hold a certificate of satisfactory completion of an MCC course in helicopters; or
ii) have at least 500 hours as a pilot on multi-pilot aeroplanes; or
iii) have at least 500 hours as a pilot in multi-pilot operations on multi- engine helicopters.

3) have passed the ATPL theoretical knowledge examinations.

b) An applicant for the first type rating course for a multi-pilot helicopter type who is a graduate from an CPL/IR (frozen ATPL), CPL (frozen ATPL), CPL/IR or CPL integrated course and who does not comply with the requirement of paragraph (a)(1), shall have the type rating issued with the privileges limited to exercising functions as co- pilot only. The limitation shall be removed once the pilot has:

1) completed 70 hours as PIC or pilot-in-command under supervision of helicopters;

2) passed the multi-pilot skill test on the applicable helicopter type as PIC.

c) Single-pilot multi-engine helicopters. An applicant for the issue of a first type rating for a single- pilot multi-engine helicopter shall:

1) before starting flight training:

i) have passed the ATPL theoretical knowledge examinations; or

ii) hold a certificate of completion of a pre-entry course conducted by an ATO. The course shall cover the following subjects of the ATPL theoretical knowledge course:
(a) Aircraft General Knowledge: airframe/systems/powerplant, and instrument/electronics,
(b) Flight Performance and Planning: mass and balance, performance;

2) in the case of applicants who have not completed an CPL/IR (frozen ATPL), CPL (frozen ATPL), or CPL/IR integrated training course, have completed at least 70 hours as PIC on helicopters.

8 Multi-crew cooperation training course — helicopters

a) The MCC training course shall comprise at least:

1) for MCC/IR:

i) 25 hours of theoretical knowledge instruction and exercises; and
ii) 20 hours of practical MCC training or 15 hours, in the case of student pilots attending an ATP/IR integrated course. When the MCC training is combined with the initial type rating training for a multi-pilot helicopter, the practical MCC training may be reduced to not less than 10 hours if the same FSTD is used for both MCC and type rating;

2) for MCC/VFR:

i) 25 hours of theoretical knowledge instruction and exercises; and
ii) 15 hours of practical MCC training or 10 hours, in the case of student pilots attending an ATP/IR integrated course. When the MCC training is combined with the initial type rating training for a multi-pilot helicopter, the practical MCC training may be reduced to not less than 7 hours if the same FSTD is used for both MCC and type rating.

b) The MCC training course shall be completed within 6 months at an ATO. An FNPT II or III qualified for MCC, an FTD 2/3 or an FFS shall be used.

c) Unless the MCC course has been combined with a multi-pilot type rating course, on completion of the MCC training course the applicant shall be given a certificate of completion.

d) An applicant having completed MCC training for any other category of aircraft shall be exempted from the requirement in paragraph (a)(1)(i) or paragraph (a)(2)(i), as applicable.

e) An applicant for MCC/IR training who has completed MCC/VFR training shall be exempted from the requirement in paragraph (a)(1)(i) and shall complete 5 hours of practical MCC/IR training.

9 Renewal of type ratings — helicopters

a) Renewal. For renewal of type ratings for helicopters, the applicant shall:

1) Pass a proficiency check in accordance with Appendix 4 to this CAD in the relevant type of helicopter or an FSTD representing that type within the 3 months immediately preceding the expiry date of the rating. The period of validity shall extend form the date of issue until 12 calendar months after the expiry date of the previous proficiency check; and

2) Complete at least 2 hours as a pilot of the relevant helicopter type within the validity period of the rating. The duration of the proficiency check may be counted towards the 2 hours.

3) When applicants hold more than 1 type rating for single-engine piston helicopters, they may achieve renewal of all the relevant type ratings by completing the proficiency check in only 1 of the relevant types held, provided that they have completed at least 2 hours of flight time as PIC on the other types during the validity period.

   The proficiency check shall be performed each time on a different type.

4) When applicants hold more than 1 type rating for single-engine turbine helicopters with a maximum certificated take-off mass up to 3 175 kg, they may achieve renewal of all the relevant type ratings by completing the proficiency check in only 1 of the relevant types held, provided that they have completed:

   i) 300 hours as PIC on helicopters;

   ii) 15 hours on each of the types held; and

   iii) at least 2 hours of PIC flight time on each of the other types during the validity period.

   The proficiency check shall be performed each time on a different type.

5) A pilot who successfully completes a skill test for the issue of an additional type rating shall achieve renewal for the relevant type ratings in the common groups, in accordance with paragraph (3) and paragraph (4).

6) The renewal of an IR, if held, may be combined with a proficiency check for a type rating.

b) An applicant who fails to achieve a pass in all sections of a proficiency check before the expiry date of a type rating shall not exercise the privileges of that rating until a pass in the proficiency check has been achieved. In the case of paragraph (a)(3) and paragraph (4), the applicant shall not exercise his privileges in any of the types.

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