



Singapore Air Safety Publication Part 2 Licensing of Professional Pilots

Publication of the
Civil Aviation Authority of Singapore
Singapore Changi Airport
P.O.Box 1, Singapore 918141

*Copies of this document may be obtained from
the CAAS website at www.caas.gov.sg*

FOREWORD

Pursuant to paragraph 20(14) of the Air Navigation Order, this Singapore Air Safety Publication (SASP) contains the requirements for the grant and renewal of flight crew licences under paragraph 20(1) of the Air Navigation Order (ANO). Any person applying for or holding a licence granted or renewed under the ANO shall comply with these requirements and all amendments which may be made from time to time. Paragraph 2 of the ANO and SASP Part D contains the definitions of some terms used in this document, to facilitate the interpretation of the requirements in this SASP.

2 Failure to comply with any of these requirements may result in suspension or the revocation of the licence and may also lead to the penalties as provided under the Thirteenth Schedule of the ANO.

3 Starting from Issue 6 of SASP Part 2, amendment to SASP Part 2 will be notified through Notice of Amendment (NOA) and shall take effect from the date stipulated in the NOAs.

4 Queries on flight crew licensing requirements should be referred to:

Civil Aviation Authority of Singapore
Safety Policy & Licensing Division
Licensing Section
Singapore Changi Airport Terminal 2
South Pier, Level 3 Unit no. 038-039
Singapore 819643
Tel: (65) 6541 2561 / 2482
Fax: (65) 6543 4941

LIST OF EFFECTIVE PAGES

Page Reference	Amendment No.	Date
General-1	-	26 Jan 2015
General-2	1	9 Oct 2018
General-3	1	9 Oct 2018
General-4	1	9 Oct 2018
General-5	-	26 Jan 2015
General-6	1	9 Oct 2018
General-7	-	26 Jan 2015
General-8	-	26 Jan 2015
Chapter 1-1	1	9 Oct 2018
Chapter 1-2	-	26 Jan 2015
Chapter 1-3	-	26 Jan 2015
Chapter 1-4	-	26 Jan 2015
Chapter 1-5	1	9 Oct 2018
Chapter 2-1	1	9 Oct 2018
Chapter 2-2	-	26 Jan 2015
Chapter 2-3	-	26 Jan 2015
Chapter 2-4	-	26 Jan 2015
Chapter 3-1	-	26 Jan 2015
Chapter 3-2	-	26 Jan 2015
Chapter 3-3	-	26 Jan 2015
Chapter 3-4	-	26 Jan 2015
Chapter 4-1	-	26 Jan 2015
Chapter 4-2	-	26 Jan 2015

Page Reference	Amendment No.	Date
Chapter 4-3	-	26 Jan 2015
Chapter 4-4	-	26 Jan 2015
Chapter 4-5	-	26 Jan 2015
Chapter 4-6	-	26 Jan 2015
Chapter 5-1	-	26 Jan 2015
Chapter 5-2	-	26 Jan 2015
Chapter 6-1	-	26 Jan 2015
Chapter 6-2	-	26 Jan 2015
Chapter 6-3	1	9 Oct 2018
Chapter 6-4	1	9 Oct 2018
Chapter 6-5	-	1 Oct 2018
Chapter 6-6	-	26 Jan 2015
Chapter 7-1	1	9 Oct 2018
Chapter 7-2	-	26 Jan 2015
Chapter 7-3	1	9 Oct 2018
Chapter 7-4	-	26 Jan 2015
Chapter 7-5	-	26 Jan 2015
Chapter 7-6	-	26 Jan 2015
Chapter 7-7	-	26 Jan 2015
Chapter 7-8	-	26 Jan 2015
Chapter 8-1	-	26 Jan 2015
Chapter 8-2	-	26 Jan 2015
Chapter 8-3	-	26 Jan 2015
Chapter 8-4	-	26 Jan 2015

Page Reference	Amendment No.	Date
Chapter 8-5	-	26 Jan 2015
Chapter 8-6	-	26 Jan 2015
Chapter 9-1	-	26 Jan 2015
Chapter 9-2	-	26 Jan 2015
Chapter 9-3	-	26 Jan 2015
Chapter 9-4	-	26 Jan 2015
Chapter 10-1	-	26 Jan 2015
Chapter 10-2	-	26 Jan 2015
Chapter 10-3	-	26 Jan 2015
Chapter 10-4	-	26 Jan 2015
Chapter 11-1	-	26 Jan 2015
Chapter 11-2	-	26 Jan 2015
Chapter 11-3	-	26 Jan 2015
Chapter 11-4	-	26 Jan 2015
Chapter 11-5	-	26 Jan 2015
Chapter 11-6	-	26 Jan 2015
Chapter 11-7	-	26 Jan 2015
Chapter 11-8	-	26 Jan 2015
Chapter 12-1	-	26 Jan 2015
Chapter 12-2	-	26 Jan 2015

Page Reference	Amendment No.	Date
Appendix A-1	-	26 Jan 2015
Appendix A-2	-	26 Jan 2015
Appendix A-3	-	26 Jan 2015
Appendix A-4	-	26 Jan 2015
Appendix A-5	-	26 Jan 2015
Appendix A-6	-	26 Jan 2015
Appendix B-1	-	1 Oct 2018
Appendix B-2	1	9 Oct 2018
Appendix B-3	-	1 Oct 2018
Appendix B-4	-	9 Oct 2018
Appendix B-5		1 Oct 2018
Appendix C-1	-	26 Jan 2015
Appendix C-2	-	26 Jan 2015
Appendix C-3	-	26 Jan 2015
Appendix C-4	-	26 Jan 2015
Appendix D-1	1	9 Oct 2018
Appendix D-2	-	26 Jan 2015
Appendix D-3	-	26 Jan 2015
Appendix D-4	-	26 Jan 2015
Appendix E-1	-	26 Jan 2015
Appendix E-2	-	26 Jan 2015
Appendix E-3	-	26 Jan 2015
Appendix E-4	-	26 Jan 2015

CONTENTS

GENERAL	FOREWORD AMENDMENTS LIST OF EFFECTIVE PAGES CONTENTS
CHAPTER 1	GENERAL INFORMATION INTRODUCTION REQUIREMENTS FOR THE ISSUE OF LICENCES PRIVILEGES OF PROFESSIONAL PILOT LICENCES AND RATINGS
CHAPTER 2	MEDICAL PROCEDURES (ADMINISTRATION) LICENSING MEDICAL EXAMINATION (LME) THE CIVIL AVIATION MEDICAL BOARD (CAMB) DESIGNATED MEDICAL EXAMINERS (DMEs) TIMELY REVALIDATION OF MEDICAL CERTIFICATE MEDICAL STANDARDS NOT MET PAYMENT OF CHARGES
CHAPTER 3	GROUND EXAMINATIONS INTRODUCTION EXAMINATION SUBJECTS PASS STANDARDS VALIDITY PERIOD OF EXAMINATIONS RESULTS
CHAPTER 4	FLYING EXPERIENCE REQUIREMENTS COMMERCIAL PILOT LICENCE (AEROPLANES) COMMERCIAL PILOT LICENCE (AEROPLANES) WITH INSTRUMENT RATING MULTI-CREW PILOT LICENCE (AEROPLANES) AIRLINE TRANSPORT PILOT LICENCE (AEROPLANES) COMMERCIAL PILOT LICENCE (HELICOPTERS) AIRLINE TRANSPORT PILOT LICENCE (HELICOPTERS) FLIGHT INSTRUCTION AND SKILLS REQUIREMENT
CHAPTER 5	THE GENERAL FLIGHT TEST THE GENERAL FLIGHT TEST GENERAL FLIGHT TEST PASS CONDITIONS GENERAL FLIGHT TEST ARRANGEMENTS COMBINED GFT/IR TEST EXEMPTION FROM THE GENERAL FLIGHT TEST – AEROPLANES EXEMPTION FROM THE GENERAL FLIGHT TEST – HELICOPTERS

CHAPTER 6	THE AIRCRAFT RATING REQUIREMENTS INTRODUCTION THE AIRCRAFT RATING TEST ENDORSEMENT FOR MIXED FLEET FLYING OPERATION CERTIFICATE OF TEST (C OF T) AND CERTIFICATE OF EXPERIENCE (C OF E) MANDATORY MULTI-ENGINES CONVERSION TRAINING (AEROPLANES) THE AIRCRAFT RATING REQUIREMENTS - CPL A) THE AIRCRAFT RATING REQUIREMENTS - MPL(A) THE AIRCRAFT RATING REQUIREMENTS - ATPL (A) THE AIRCRAFT RATING REQUIREMENTS - CPL(H) THE AIRCRAFT RATING REQUIREMENTS - ATPL(H)
CHAPTER 7	THE INSTRUMENT RATING (AEROPLANES) THE INSTRUMENT RATING PRIVILEGES APPROVED TRAINING EXEMPTION FROM APPROVED TRAINING FLYING EXPERIENCE REQUIREMENTS GROUND EXAMINATION REQUIREMENTS THE INSTRUMENT RATING FLIGHT TEST INSTRUMENT RATING FLIGHT TEST: PASS CONDITIONS TERMINATION OF A TEST BY THE APPLICANT TERMINATION OF A TEST BY THE CAAS INSPECTOR OR AUTHORISED FLIGHT EXAMINER FLIGHT TEST ARRANGEMENTS THE INSTRUMENT RATING CERTIFICATE OF TEST TEST FOR REMOVAL OF THE MULTI-CREW OR SINGLE-ENGINE AEROPLANE RESTRICTION
CHAPTER 8	THE INSTRUMENT RATING (HELICOPTERS) THE INSTRUMENT RATING PRIVILEGES APPROVED TRAINING EXEMPTION FROM APPROVED TRAINING FLYING EXPERIENCE REQUIREMENTS GROUND EXAMINATION REQUIREMENTS THE INSTRUMENT RATING FLIGHT TEST INSTRUMENT RATING FLIGHT TEST: PASS CONDITIONS FLIGHT TEST ARRANGEMENTS THE INSTRUMENT RATING CERTIFICATE OF TEST FLIGHT TEST TO EXTEND THE RATING PRIVILEGES TO ADDITIONAL TYPES OF HELICOPTERS
CHAPTER 9	VALIDATION OF A FOREIGN PILOT LICENCE APPLICABILITY PREREQUISITIES PURPOSE OF VALIDATION AND CORRESPONDING PREREQUISITIES VALIDITY OF THE CERTIFICATE OF VALIDATION CONDITIONS AND LIMITATIONS REAPPLICATION FOR THE CERTIFICATE OF VALIDATION
CHAPTER 10	REQUIREMENTS FOR THE RENEWAL OF A LAPSED AIRCRAFT RATING OR INSTRUMENT RATING INTRODUCTION RENEWAL OF A LAPSED AIRCRAFT RATING RENEWAL OF A LAPSED INSTRUMENT RATING

CHAPTER 11	CONVERSION OF A FOREIGN PROFESSIONAL PILOT LICENCE APPLICABILITY PREREQUISITES FLYING EXPERIENCE REQUIREMENTS ADDITIONAL CONVERSION REQUIREMENTS
CHAPTER 12	SPECIAL LICENSING REQUIREMENTS FOR RSAF MILITARY PILOTS APPLICATION REQUIREMENTS (POLICY) RECOGNITION OF MILITARY QUALIFICATIONS REQUIREMENT FOR APPROVED TRAINING INSTRUMENT RATING (AEROPLANES AND HELICOPTERS)
APPENDIX A	FLIGHT INSTRUCTIONS AND SKILLS REQUIREMENTS FOR THE ISSUE OF CPL AND ATPL
APPENDIX B	RECORDING AND CREDITING OF FLIGHT TIME
APPENDIX C	THE GENERAL FLIGHT TEST
APPENDIX D	INSTRUMENT RATING FLIGHT TEST SYLLABUS AND FLIGHT TEST CONDITIONS
APPENDIX E	FINAL ASSESSMENT FLIGHT TEST FOR MPL(A)

INTENTIONALLY
LEFT BLANK

CHAPTER 1 GENERAL INFORMATION

INTRODUCTION

- 1 The ANO provides for the issue of a pilot licence and its associated ratings for a person to act as pilot of a Singapore registered aircraft.
- 2 The DGCA may grant these licences and ratings subject to being satisfied that the applicant is a fit person to hold the licence or rating and is appropriately qualified to act in the capacity to which the licence relates.
- 3 The privileges attached to each licence and rating, are set out in the ANO for the time being in force.

REQUIREMENTS FOR THE ISSUE OF LICENCES

4 **Age and Validity**

- (a) The age limit and maximum period of validity for all classes of professional pilot licences are specified in paragraph 20 and the Eighth Schedule of the ANO.
- (b) – deleted -
- (c) – deleted -
- (d) – deleted -

Recognition of Flying Experience

- 5 Throughout this publication, where flying experience logged in the capacity as Pilot-in-command under supervision (PIC U/S) is required, Pilot-in-command (PIC) hours may be recognised.

Medical Standards

- 6 An applicant, whether ab initio or requiring an abridged course, will not be accepted for training for an approved Multi-crew Pilot Licence or Commercial Pilot Licence course unless he satisfies the medical requirements set out in the ANO and the SASP Part 9 by passing a medical examination for the appropriate licence sought and has been assessed as fit by the Civil Aviation Medical Board (CAMB).
- 7 The applicant for a MPL (Aeroplanes), CPL (Aeroplanes), CPL (Helicopters), ATPL (Aeroplanes) and ATPL (Helicopters) must pass the Class 1 Medical Examination as specified in the Fourteenth Schedule of the ANO.

Language Proficiency Requirements

- 8.1 An applicant shall demonstrate the ability to speak and understand English language used for radio-telephony communications.
- 8.2 A professional pilot licence shall not be valid unless the holder has been certified to at least the Operational Level (Level 4) of the ICAO Language Proficiency Rating Scale.
- 8.3 A professional pilot licence holder who demonstrates language proficiency below the Expert Level (Level 6) shall be evaluated at the following intervals:
 - (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.
- 8.4 The evaluation and certification of language proficiency shall be performed only by persons authorised by or otherwise acceptable to the DGCA.

AIRCRAFT TO BE USED FOR FLIGHT TRAINING AND TESTS

- 9.1 All flying training and tests shall be carried out in a Singapore registered aircraft or a DGCA approved flight simulation training device where applicable.
- 9.2 Notwithstanding paragraph 9.1, an applicant enrolled in an approved Aviation Training Organisation (ATO) located outside Singapore may carry out the required flying training and flight tests in a non-Singapore registered aircraft that is accepted for use under that ATO's Certificate of Approval.

PRIVILEGES OF PROFESSIONAL PILOT LICENCES AND RATINGS

Commercial Pilot Licence (Aeroplanes)

- 10 In addition to the privileges for the Private Pilot Licence (Aeroplanes) which includes a Night Rating (Aeroplanes), the holder of a Commercial Pilot Licence shall be entitled to fly as —
 - (a) pilot-in-command of any aeroplane certificated for single pilot operation and which is of a type specified in Part I of the aircraft rating included in the licence, when the aeroplane is engaged in a flight for the purpose of public transport or aerial work:

Provided that —

 - (i) he shall not, unless his licence includes an Instrument Rating (Aeroplanes), fly such an aeroplane on any scheduled journey;
 - (ii) he shall not fly such an aeroplane at night unless an Instrument Rating (Aeroplanes) is included in his licence or he has within the immediately

preceding 12 months carried out as pilot-in-command not less than 5 take-offs and 5 landings at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;

- (iii) he shall not, unless his licence includes an Instrument rating (Aeroplanes), fly any such aeroplane of which the maximum total weight authorised exceeds 2,300 kg on any flight for the purpose of public transport except a flight beginning and ending at the same aerodrome and not extending beyond 25 nautical miles from that aerodrome;
- (b) co-pilot of any aeroplane of a type specified in Parts I and II of such aircraft rating when the aeroplane is engaged in a flight for the purpose of public transport or aerial work.

Multi-crew Pilot Licence (Aeroplanes)

11 The licence-

- (a) shall entitle the holder to exercise the privileges of a Private Pilot's Licence (Aeroplanes) which includes a night rating (aeroplanes);
- (b) shall entitle the holder to exercise the privileges of Instrument Rating (aeroplanes); and
- (c) shall entitle the holder to fly as a co-pilot of any aeroplane required to be operated with a co-pilot and which is of a type specified in Part II of the aircraft rating included in the licence, when the aeroplane is engaged in a flight for the purpose of public transport or aerial work.

Provided that he shall not, unless he has demonstrated an ability to act as pilot-in-command in a single-pilot operation exercised solely by reference to instruments, exercise the privileges of an Instrument Rating (Aeroplanes) in a single-pilot operation in aeroplanes.

Airline Transport Pilot Licence (Aeroplanes)

12 In addition to the privileges given above for the Commercial Pilot Licence (Aeroplanes) which includes an Instrument Rating (Aeroplanes) the holder of an Airline Transport Pilot Licence shall be entitled to fly as —

- (a) pilot-in-command of any aeroplane of a type specified in Part I of the aircraft rating included in the licence when the aeroplane is engaged in a flight for the purpose of public transport or aerial work
- (b) co-pilot of any aeroplane of a type specified in Part I or Part II of such aircraft rating when the aeroplane is engaged in a flight for the purpose of public transport or aerial work.

Commercial Pilot Licence (Helicopters)

13 In addition to the privileges given for the Private Pilot Licence (Helicopters) which includes a night rating (helicopters), the holder of a Commercial Pilot Licence shall be entitled to fly as

- (a) pilot-in-command of any helicopter certificated for single pilot operation and which is of a type specified in Part I of the aircraft rating included in the licence when the helicopter is engaged in a flight for any purpose whatsoever:

Provided that —

- (i) he shall not, unless his licence includes an Instrument Rating (helicopters) fly such a helicopter on any scheduled journey or on any flight for the purpose of public transport in Instrument Meteorological Conditions;
 - (ii) he shall not fly such a helicopter at night unless his licence includes an Instrument Rating (Helicopters) or he has within the immediately preceding 12 months carried out as pilot-in-command not less than 5 flights, each consisting of a take-off, a transition from hover to forward flight, a climb to at least 500 feet and a landing, at a time when the depression of the centre of the sun is not less than 12 degrees below the horizon;
- (b) co-pilot of any helicopter required to be operated with a co-pilot of a type specified in Part I or Part II of such aircraft rating for purposes whatsoever.

Airline Transport Pilot Licence (Helicopters)

14 In addition to the privileges given above for the Commercial Pilot Licence (Helicopters) the holder of the licence shall be entitled to fly as —

- (a) pilot-in-command of any helicopter of a type specified in Part I of the aircraft rating included in the licence when the aircraft is engaged on a flight for any purpose whatsoever.
- (b) co-pilot of any helicopter required to be operated with a co-pilot of a type specified in Part I or Part II of such aircraft rating for any purpose whatsoever.

Instrument Rating (Aeroplanes)

15 An instrument Rating (Aeroplanes) shall entitle the holder of the licence to act as pilot-in-command or co-pilot of an aeroplane flying in controlled airspace in circumstances which require compliance with the Instrument Flight Rules.

Instrument Rating (Helicopters)

16 Instrument Rating (Helicopters) shall entitle the holder of the licence to act as pilot-in-command of a helicopter flying in controlled airspace in circumstances which require compliance with the Instrument Flight Rules.

Flying Instructor's Rating

17 - *deleted* -

Assistant Flying Instructor's Rating

18 - *deleted* -



CHAPTER 2 MEDICAL PROCEDURES (ADMINISTRATION)

LICENSING MEDICAL EXAMINATION (LME)

- 1 An applicant for the initial issue or renewal of a professional pilot licence, viz CPL, MPL or ATPL, must satisfy the Civil Aviation Medical Board (CAMB) that he/she meets the Class 1 medical requirements as set out in the Fourteenth Schedule of the ANO and the SASP Part 9. The level of medical fitness to be met for the renewal of a Medical Certificate shall be the same as that for the initial assessment except where otherwise specifically stated.
- 2 Prospective applicants must be free from any physical disabilities and defect of hearing, vision or colour perception.
- 3 Applicants are required to undergo the initial or renewal Licensing Medical Examination (LME) for the appropriate licence sought.
 - 3.1 The LME is to be conducted by a Designated Medical Examiner (DME). LME for the initial, every fourth renewal and the renewal at 60 years of age for CPL, MPL or ATPL holders shall be at the clinical premises of the CAMB.
 - 3.2 The applicant shall sign and furnish to the DME a declaration, made in a form prescribed by the DGCA, stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. He/She shall indicate to the DME whether a previous medical assessment had been unsuccessful and, if so, the reason for such.
 - 3.3 The report of the LME will be sent to the CAMB for assessment of the applicant's fitness to hold a professional pilot licence. It is the applicant's responsibility to ensure that he/she has been declared as fit by CAMB prior to exercising the privileges of the licence that he/she is applying for. He/She must hold a valid Medical Certificate for the initial issue or renewal of a licence. The validity period of the licence is subject in part to the validity period of the applicant's Medical Certificate.
- 4 The maximum period of validity of the Medical Certificate is specified in Part A of the Eighth Schedule of the ANO. The period of validity listed will be based on the age of the applicant at the time of successful LME. The medical validity period may be reduced when clinically indicated.
- 5 An applicant is required to undergo another initial LME if he/she fails to revalidate his/her Medical Certificate within 12 months after the expiry of the Medical Certificate.
- 6 Flight crew members shall not exercise the privileges of their licences unless they hold a valid Medical Certificate and the licence bears a valid Certificate of Test or a valid Certificate of Experience appropriate to the functions to be performed on that flight.

THE CIVIL AVIATION MEDICAL BOARD (CAMB)

- 7.1 The CAMB is a board of medical specialists that advises the DGCA on the regulation of medical standards of Singapore licensed flight crew and air traffic controllers and-on the aeromedical requirements of Singapore in relation to international standards set by the International Civil Aviation Organisation (ICAO).
- 7.2 For the purpose of carrying out the necessary medical assessments, the DGCA has appointed a panel of Medical Assessors, as part of the Office of CAMB, who are competent in evaluating and assessing medical conditions of flight safety. Licensing Medical Assessors' Boards (LMAB) are convened to assess the medical fitness of an applicant for the issue or renewal of a Medical Certificate in accordance with the Fourteenth Schedule of the ANO and the SASP Part 9.

DESIGNATED MEDICAL EXAMINERS (DMEs)

- 8 For the purpose of carrying out the necessary medical examinations for flight crew, the DGCA has appointed a panel of Designated Medical Examiners (DMEs), to conduct LME for the initial issue and renewal of flight crew licences. The list of names and addresses of DMEs is published in the Aeronautical Information Circular which is available on the CAAS website at www.caas.gov.sg.

TIMELY REVALIDATION OF MEDICAL CERTIFICATE

- 9 The Medical Certificate will bear the date of the applicant's successful LME, its expiry date and other requirements e.g. Chest X-ray, ECG, Audiogram etc.
- 10 The licence holder is responsible for ensuring that his/her Medical Certificate is valid prior to exercising the privileges of his/her licence.
- 11 A licence holder shall arrange for his/her renewal LME to take place up to 45 days prior to the expiry of his/her existing Medical Certificate.

MEDICAL STANDARDS NOT MET

- 12.1 If the medical standards as presented in the ANO's Fourteenth Schedule and the SASP Part 9 for a particular licence are not met, the corresponding Medical Certificate for that particular licence will not be issued or renewed unless the following conditions are fulfilled:
- (a) accredited medical conclusion arrived at by CAMB 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 consideration.

- (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.

12.2 A holder of a licence granted in part on the basis of medical fitness shall not be entitled to perform any of the functions to which his/her licence relates if he/she knows or has reason to believe that his/her physical condition renders him/her temporarily or permanently unfit to perform such function. Those who:

- (a) suffers any personal injury involving incapacity to undertake the functions to which his/ her licence relates;
- (b) suffers any illness involving incapacity to undertake those functions for a period extending beyond 20 days;
- (c) knows or has reasons to believe that she is pregnant;
- (d) developed a medical condition that requires continued treatment with prescribed medication; or
- (e) has received medical treatment requiring hospitalisation;

is to report the issue or occurrence to CAMB as soon as possible. He/she shall not exercise the privileges of the licence and related ratings until he/she has satisfied the CAMB that his/her medical fitness has been restored to the standard as specified in the Fourteenth Schedule of the ANO and the SASP Part 9. If under any doubt, he/she is to seek clarification or guidance from a DME to ascertain if the medical issue or occurrence is of relevance to flight safety.

PAYMENT OF CHARGES

- 13 The fees to be charged by the DME for medical examinations may follow guidelines set by the Singapore Medical Council (SMC) or at rates as determined by the DME performing the medical examinations.
- 14 The fee to be paid by the applicant for a medical evaluation by the CAMB is laid down in the Twelfth Schedule of the ANO.

INTENTIONALLY
LEFT BLANK

CHAPTER 3 GROUND EXAMINATIONS

INTRODUCTION

- 1 An applicant for a Professional Pilot Licence shall demonstrate a level of knowledge appropriate to the privileges of the licence or rating.

Note: Refer to AC FCL-6 for guidance on guidance on the validity period of the examination results for the old syllabus.

EXAMINATION SUBJECTS

- 2 The required examination subjects for the various types of licences and the Instrument Rating (IR) are listed in the table below.

Subject	Aeroplane			Helicopter			
	ATPL	CPL/IR	CPL	ATPL/IR	ATPL	CPL/IR	CPL
Air Law				●			
Airframe, Systems and Engines	●	○		●		○	
Instrumentation	●	○	○	●	●	○	○
Mass and Balance	●	○		●		○	
Performance – Aeroplane	●	○					
Performance – Helicopter				●		○	
Flight Planning and Monitoring	●	○	○	●	●	○	○
Human Performance				●			
Meteorology	●	○	○	●	●	○	○
General Navigation	●	○		●		○	
Radio Navigation	●	○	○	●	●	○	○
Operational Procedures	●	○		●		○	
Principles of Flight - Aeroplane	●	○					
Principles of Flight - Helicopter					●		
VFR Communications				●			
IFR Communications		●		●		●	
Total No. of Papers	14	14	13	14	13	14	13
Legend							
● Required ATPL Paper ○ Required CPL Paper ●/○ Paper includes IR component							
■ Not Required							

Note : The learning objectives for each of the subjects listed above are found in AC FCL-7 which also contains a list of publications which applicants may find helpful.

- 3 Apart from the examination subjects listed above, the applicant shall pass the Aircraft Type Technical examination to qualify for the inclusion of an aircraft rating in the licence.

- 4 All MPL and CPL holders intending to operate an aircraft type certificated for multi-pilot operation shall demonstrate theoretical knowledge at the ATPL level.
- 5 An applicant for an ATPL, having passed the theoretical examinations required for a CPL/IR, shall be deemed to have obtained a pass in each of the following subjects at the ATPL level:
 - (a) Air Law;
 - (b) Human Performance;
 - (c) Principles of Flight (Helicopter) only;
 - (d) VFR Communications; and
 - (e) IFR Communications.
- 6 A holder of a valid CPL(A), CPL(H) or ATPL(H) applying for an Instrument Rating shall obtain a pass in each of the following subjects:
 - (a) Instrumentation;
 - (b) Flight Planning and Monitoring;
 - (c) Meteorology;
 - (d) Radio Navigation; and
 - (e) IFR Communications.

PASS STANDARDS

- 7 A pass in an examination subject will be awarded to an applicant who has achieved at least 75% of the score.
- 8 An applicant shall not be permitted to attempt an examination subject more than three times in any three-month period.
- 9 Should any applicant be deemed to have not complied with the examination instructions, the DGCA may at his discretion, void the applicant's examination results for that subject or take such other appropriate measures as necessary.

VALIDITY PERIOD OF EXAMINATION RESULTS

- 10 A pass in any subject listed in paragraph 2 shall be valid for 36 months.
- 11 The Aircraft Type Technical examination does not form part of the examinations described in paragraph 2. A pass in this subject shall be valid for 18 months.

- 12 The validity period of the ATPL examination results for the purpose of obtaining an ATPL is 5 years:
- (a) from the date of obtaining a pass in all the subjects; or
 - (b) from the last date of endorsement in the Certificate of Test for either an instrument rating or a multi-pilot aircraft type rating,
- whichever is later.

INTENTIONALLY
LEFT BLANK

CHAPTER 4 FLYING EXPERIENCE REQUIREMENTS

COMMERCIAL PILOT LICENCE (AEROPLANES)

- 1 An applicant for a Commercial Pilot Licence (Aeroplanes) (CPL(A)) shall produce evidence that:-
 - (a) he has successfully completed an approved course of flight and ground training; or
 - (b) he is in current flying practice, qualified and serving as a pilot in the Republic of Singapore Air Force (RSAF) with at least 700 hours as pilot of aeroplanes meeting the full detailed requirements set out in paragraph 2 below; or
 - (c) he meets in full the detailed experience requirements set out in paragraph 5 below except that the total hours as pilot of aeroplanes exceeds 700 hours.
- 2 The minimum flying experience required for grant of a CPL(A) in the case of a graduate from an approved course of training is 155 hours which shall include not less than:
 - (a) 100 hours as pilot-in-command (PIC) of which not less than 20 hours must be cross-country or overseas flying including one flight of at least 300 nautical miles, in the course of which the aeroplane landed and came to rest at not less than two intermediate aerodromes.
 - (b) 10 hours of night flying as PIC or pilot under instruction of which not less than 5 hours must be as pilot-in-command. This night flying experience must include not less than 10 take-offs and 10 landings without assistance.
 - (c) 10 hours of instrument flying as pilot under instruction of which not more than 5 hours may be instrument ground time. In the case of a holder of a valid Instrument Rating (Helicopters) or a valid RSAF Master Green or Green Instrument Rating on helicopters, this requirement may be reduced to not less than 2 hours.

COMMERCIAL PILOT LICENCE (AEROPLANES) WITH INSTRUMENT RATING

- 3 The minimum flying experience required for grant of a CPL/IR (Aeroplanes) for a graduate from an approved course of CPL/IR training is 200 hours as pilot of aeroplanes. The breakdown of the 200 hours must include that as specified in paragraph 2 above and the Instrument Rating (Aeroplanes) specified in Chapter 7. Appropriate flight time may be counted toward satisfying both sets of requirements.
- 4 Flight time in microlight aeroplanes, or in self-launching motor gliders, will not be counted toward satisfying any of the requirements specified in paragraphs 2 or 3 above.
- 5 The minimum flying experience for a pilot who has not completed an approved course of full time flight and ground training is 700 hours as pilot of aeroplanes. This shall include meeting the particular requirements specified below. Each of these requirements shall be

met in full but, except where stated otherwise, hours may be credited, where appropriate, to more than one requirement:

- (a) 200 hours as PIC of aeroplanes of which up to a maximum of 100 hours may be as co-pilot acting as pilot-in-command under supervision PIC U/S.
 - (b) 50 hours of cross-country or overseas flying as PIC of aeroplanes, including a route of at least 300 nautical miles, in the course of which the aeroplane or helicopter landed and came to rest at not less than two intermediate aerodromes. At least 10 of the 50 hours must be by night or by sole reference to instruments. Any instrument flight time counted towards satisfying this requirement may not be counted towards satisfying that specified in paragraph 5(d).
 - (c) 10 hours of night flying as specified in paragraph 2(b) above.
 - (d) 40 hours of flying as pilot by sole reference to instruments, of which not less than 20 hours must be a pilot of aeroplanes. The remainder may be as a pilot of aeroplanes or on an approved flight simulation training device. The instrument flying in aeroplanes may be in actual or simulated conditions.
 - (e) 35 hours on multi-engine aeroplane if an Instrument Rating for a multi-engine aeroplane is sought.
 - (f) The remainder of the 700 hours of experience required may comprise flight time in aeroplanes in any of the following capacities: -
 - (i) as PIC;
 - (ii) as pilot-under-instruction;
 - (iii) as co-pilot acting as PIC U/S; or
 - (iv) as co-pilot.
- Note:** Refer to **Appendix B** for guidance on crediting of flight time.
- (g) Flight time in microlight aeroplanes, or in self-launching motor gliders, will not be counted towards satisfying the above requirements.

MULTI-CREW PILOT LICENCE (AEROPLANES)

- 6 An applicant for a Multi-crew Pilot Licence (Aeroplanes) (MPL(A)) must produce evidence that he has successfully completed a MPL training course approved by the DGCA conducted by an FTO in accordance with SASP 10, and passed the Final Assessment Flight Test as detailed in **Appendix E**. The applicant shall have completed, as part of the training course, flying training comprising a total of at least 240 hours, composed of hours as Pilot Flying and Pilot Monitoring.
- 7 The MPL(A) will be restricted to the specific AOC holder for which the MPL training course was developed until the completion of the AOC holder's structured initial operating experience (IOE) programme and line check. The restriction will be removed upon successful completion of the line check.

AIRLINE TRANSPORT PILOT LICENCE (AEROPLANES)

8 The minimum flying experience required for grant of an ATPL(A) is 1500 hours as pilot of aeroplanes which shall meet the requirements as specified below. Each of these requirements shall be met in full but, except where stated otherwise, hours may be credited, where appropriate towards to more than one requirement.

- (a) 500 hours as PIC U/S or 250 hours as PIC of aeroplanes of which up to a maximum of 150 hours may be as co-pilot acting as PIC U/S.
- (b) 200 hours of cross-country or overseas flying of which not less than 100 hours as PIC or PIC U/S on aeroplanes.
- (c) 100 hours of night flying in aeroplanes as PIC or PIC U/S or as co-pilot, of which not less than 25 hours must be on cross-country or overseas flying as PIC or PIC U/S, inclusive of two flights terminating at an aerodrome not less than 65 nautical miles from the point of departure. The holder of a valid CPL(H) or ATPL(H) may be exempted from the cross-country requirement provided that he can produce evidence of having completed 2 such flights as PIC of helicopters. This night flying must include at least 5 hours and 10 take-offs and 10 landings as PIC.
- (d) 75 hours flying as pilot by sole reference to instruments of which not more than 30 hours may be instrument ground time.
- (e) The remainder of the 1500 hours experience required may comprise flight time on flying machines in any of the following capacities: -
 - (i) as PIC;
 - (ii) as pilot-under-instruction;
 - (iii) as PIC U/S; or
 - (iv) as co-pilot.

Note 1 : Refer to **Appendix B** for guidance on crediting of flight time.

Note 2 : ATPLs upgraded from an MPL will be restricted to operations on a multi-crew certificated aircraft.

- (f) Flight time in microlight aeroplanes, or in self-launching motor gliders, will not be counted towards satisfying the above requirements.

COMMERCIAL PILOT LICENCE (HELICOPTERS)

9 An applicant for a Commercial Pilot Licence (Helicopters) [CPL(H)] must produce evidence that:

- (a) he has successfully completed an approved course of flight and ground training; or

- (b) he is in current flying practice as a qualified and serving pilot with the Republic of Singapore Air Force with at least 400 hours of experience as pilot of helicopters which must meet in full the detailed experience requirements specified in para 10(a) to 10(c) below; or
 - (c) he has a minimum flying experience of 400 hours as PIC of helicopter and in addition meets in full the detailed experience requirements in paragraph 10 below.
- 10 The minimum flying experience required for grant of a CPL(H) in the case of a graduate from an approved course of training is 150 hours as pilot-in-command (PIC) or pilot-under-instruction on helicopters. The helicopter flying must include not less than 35 hours as PIC, which may include any of the pilot-in-command time specified below:
- (a) 10 hours cross-country or overseas flying as PIC, which must include a flight in the course of which landing at 2 different points shall be made.
 - (b) 10 hours instruction in instrument flying of which not more than 5 hours may be instrument ground time.
 - (c) 5 hours of night flying which must include not less than 5 take-offs and 5 landing patterns as PIC.
- 11 Credit on experience as a pilot under instruction in an approved flight simulation training device shall be limited to a maximum of 10 hours.

AIRLINE TRANSPORT PILOT LICENCE (HELICOPTERS)

- 12 An applicant for an Airline Transport Pilot Licence (Helicopters) must produce evidence of having completed a total of at least 1,000 hours as a pilot of helicopters.
- 13 The 1000 hours must meet the breakdown as specified below:
- (a) 250 hours, either as pilot-in-command, or made up by not less than 100 hours as pilot-in-command and the necessary additional flight time as co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, provided that the method of supervision employed is acceptable to the DGCA.
 - (b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot-in-command or as co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, provided that the method of supervision employed is acceptable to the DGCA.
 - (c) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time.
 - (d) 50 hours of night flight as pilot-in-command or as co-pilot.
- 14 Credit on experience as a pilot under instruction in an approved flight simulation training device 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.

- 15 The remainder of the 1,000 hours experience required may comprise flight time in aeroplanes in any of the following capacities:
- (a) PIC, counted in full.
 - (b) as pilot under instruction, counted in full.
 - (c) as P1 U/S, counted in full.
 - (d) as co-pilot, counted at half rate.

FLIGHT INSTRUCTION AND SKILLS REQUIREMENT

- 16 An applicant for a CPL or ATPL shall undergo the flight instructions and demonstrate the skills as spelt in **Appendix A** prior to the issue of the licence.
- 17 An applicant for an MPL(A) must demonstrate the skills as spelt in **Appendix E** prior to the issue of the licence.

INTENTIONALLY
LEFT BLANK

CHAPTER 5 THE GENERAL FLIGHT TEST

THE GENERAL FLIGHT TEST

- 1 Applicants for a CPL will be required to pass a General Flight Test (GFT) conducted by a CAAS Inspector or an Authorised Flight Examiner. The GFT should be carried out in an aircraft. The test comprises an assessment of the applicant's preparation for flight and pre take-off procedures and the following sections:
 - Section 1 : Cross-country flight
 - Section 2 : Basic aircraft handling
 - Section 3 : Instrument flying
- 2 The aim of the test is to ensure the applicant has demonstrated the ability to:
 - (a) perform as pilot-in-command (PIC) of the aircraft
 - (b) perform the procedures and manoeuvres with degree of competency appropriate to the privileges granted to the holder of a professional pilot licence;
 - (c) operate the aircraft within its limitations;
 - (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 successful outcome of a procedure or manoeuvre is never seriously in doubt.
- 3 Pertaining to the GFT for aeroplanes, the GFT shall be conducted in a single-crew certificated aeroplane based on the aircraft rating sought for endorsement in the licence.
- 4 Pertaining to the GFT for helicopters, Section 3 is not applicable. The GFT may be conducted in either a single-engine or multi-engine helicopter. If the GFT is conducted in a single-engine helicopter, Section 2 shall be conducted at more than 90% maximum landing weight.

GENERAL FLIGHT TEST PASS CONDITIONS

- 6 If the applicant fails only one section of the test, he may be allowed to reattempt that particular section which he failed. If the applicant fails to pass the failed section within the next 2 attempts, he will be required to retake the full GFT subject to compliance with paragraph 8.
- 7 If the applicant fails more than one section of the GFT, he will be required to retake the full GFT subject to compliance with paragraph 8.
- 8 If the applicant is required to retake the full GFT, he will be required to undergo further training before applying for the retest. He may only apply for the GFT after being recommended by the Flying Training Organisation.
- 9 The GFT shall be completed within 21 days including any reattempt.

GENERAL FLIGHT TEST ARRANGEMENTS

- 10 Applicants undergoing an approved course of training will normally be offered for the General Flight Test under arrangements made by the flying training organisation (FTO) conducting the course, subject to acceptance by the DGCA. The FTO concerned will also normally be responsible for providing an aircraft acceptable to DGCA for the conduct of the test.
- 11 Other applicants will be required to make arrangements for the test acceptable to the DGCA, and to provide a suitable aircraft for the test. Such aircraft must be maintained and equipped to requirements specified by the DGCA and be approved for the conduct of the test.
- 12 Payment of the statutory fee for the test must be made before any test.

COMBINED GFT/IR TEST

- 13 For students who have completed an approved course of training for the CPL/IR (Aeroplanes), the General Flight Test may be combined with the Instrument Rating Flight Test. This combined GFT/IR test is conducted in accordance to a syllabus approved by DGCA and carried out by the FTO. The students will be given all the information they need concerning the test by the FTO which carries out the training.

EXEMPTION FROM THE GENERAL FLIGHT TEST - AEROPLANES

- 14 Exemption from certain section(s) of the GFT pertaining to aeroplane may be granted to the following:
 - (a) The holder of a valid Singapore Instrument Rating (Aeroplanes) may be exempted from Section 3 of the GFT.
 - (b) An RSAF aeroplane pilot who is in current flying practice may be exempted from certain Sections of GFT, as determined by the DGCA on a case by case basis.
 - (c) The holders of a valid Singapore CPL(H) or ATPL(H) may be exempted from Section 1 of the GFT.

EXEMPTION FROM THE GENERAL FLIGHT TEST - HELICOPTERS

- 15 Exemption from certain sections(s) of the GFT pertaining to helicopters may be granted as follows to:
 - (a) An RSAF helicopter pilot who is in current flying practice may be exempted from certain Sections of GFT, as determined by the DGCA on a case by case basis.
 - (b) The holders of a valid CPL(A) or ATPL(A) may be exempted from Section 1 of the GFT.

CHAPTER 6 THE AIRCRAFT RATING REQUIREMENTS

INTRODUCTION

- 1 The privileges of a professional pilot licence may only be exercised in an aircraft type as specified in the Aircraft Rating of the licence in conjunction with a valid Certificate of Test or a valid Certificate of Experience. The private pilot privileges of the licence may be exercised in the aircraft type endorsed in the Aircraft Rating - Private Pilot Privileges.

Note 1 : A Class rating is established for aeroplanes certificated for single-pilot operations and shall comprise :

- (i) single-engine, land
- (ii) single-engine, sea
- (iii) multi-engine, land
- (iv) multi-engine, sea

Note 2 : The Aircraft Ratings and the conditions under which such ratings may be endorsed on a Singapore licence is specified in an Advisory Circular.

- 2 A professional pilot licence will not be issued unless the applicant has qualified for inclusion in the Aircraft Rating of the licence, either in Part I (entitling the holder to fly as PIC) or in Part II (entitling the holder to fly as co-pilot), of at least one aircraft type.
- 3 In the case of the issue of an ATPL the applicant must qualify for inclusion, in Part I of an Aircraft Rating of a multi-engine aeroplane required to be operated with a co-pilot.
- 4 Entries in Part II (co-pilot only entitlement) of the Aircraft Rating will be made in respect only of aircraft which are required to be flown by a flight crew of at least two pilots.
- 5 To qualify for endorsement of an aircraft rating in the professional pilot licence, the applicant shall:
 - (a) pass the Aircraft Type Technical examination for the aircraft type to be endorsed on the licence;
 - (b) complete an approved training programme to PIC standards; and
 - (c) pass the Aircraft Rating Test on the aircraft type to be endorsed on the licence to PIC standards.

Note: The Aircraft Type Technical examination shall be passed for that variant of the aircraft on which the Aircraft Rating Test is conducted. Once the Aircraft Rating is issued, it entitles the holder to exercise privileges on other variants of the same aircraft type unless otherwise stated.

THE AIRCRAFT RATING TEST

- 6 The Aircraft Rating test shall be conducted by a CAAS Inspector or Authorised Flight Examiner (AFE).
- 7 The Aircraft Rating test requires the applicant to demonstrate his competence in carrying out normal and emergency manoeuvres and drills appropriate to the particular aircraft type. The contents of the test are specified in the application form for the inclusion of an aircraft type in the Aircraft Rating.
- 8 In aircraft which are required to be flown by two pilots, the applicant shall be tested to PIC standards.
- 9 In some cases, certain of the manoeuvres and drills included in the form may be conducted in an aircraft flight simulation training device which must be approved for the purpose by the DGCA. The simulator approval document specifies the manoeuvres and drills for which it is approved. Access to such simulators can normally only be obtained through the operators to whom the simulator approval has been given.
- 10 On satisfactory completion of the flight test, the CAAS Inspector or the AFE will certify to that effect against each of the manoeuvres and drills specified in the form where any of the items are carried out in an approved flight simulation training device.
- 11 An application for grant of a professional pilot licence shall be made in a form and manner prescribed by the DGCA. Provided that it is satisfactory and that other licensing requirements have been met, including the ground examination requirements in respect of the Aircraft Rating, the DGCA will issue the licence with the type of aircraft upon which the flight test and associated ground examinations were passed entered in the Aircraft Rating, either in Part I and Part II, as appropriate. The Aircraft Rating C of T in respect of that type will be endorsed with a date effective from the date on which all the items in the flight test were satisfactorily completed.
- 12 The procedure for inclusion of a further type in the Aircraft Rating subsequent on the first is similar to paragraph 11.
- 13 All the items in the Aircraft Rating Test shall be satisfactorily completed within 21 days.
- 15 Notwithstanding paragraph 13, at the sole discretion of the DGCA, all the items in the Aircraft Type Test may be completed in more than 21 days provided the applicant is forming the initial core group of trained personnel for:
 - (a) a new aircraft type introduced into the Singapore Register; or
 - (b) a new aircraft type utilised by the Air Operator, Aviation Training Organisation or Flying Club;subject to the applicant's previous flying experience.

ENDORSEMENT FOR MIXED FLEET FLYING OPERATION

- 15 Any licence holder seeking endorsement on the licence for Mixed Fleet Flying (MFF) operation shall provide evidence from the operator to demonstrate that the applicant meets the pre-requisites for MFF operation as spelt out in the Air Operator Certificate Requirements, and has successfully completed the operator's MFF Programme. At the time of application, the licence holder shall ensure that the Certificates of Test for the two MFF aeroplane types are valid and current.

CERTIFICATE OF TEST (C OF T) AND CERTIFICATE OF EXPERIENCE (C OF E)

- 16 The privileges of a professional pilot licence may only be exercised in aircraft specified in the Aircraft Rating and in respect of which the licence also contain a valid C of T or C of E. The purpose and period for which a C of T or C of E is valid is presented by cases which may be summarised in general terms as follows:-

Case A Carriage of passenger in a flight in respect of which the holder of the licence receive remuneration, other than a public transport flight

A C of T is required in respect of the type of aircraft in which the flight is made and the capacity (PIC or co-pilot) in which the licence holder is acting. The period of validity of a C of T for this purpose is 12 months. The applicant must also produce evidence that he has, in the preceding six months, acquired not less than 15 hours experience as PIC or co-pilot as appropriate to the capacity in which the licence holder is acting.

Case B Public transport flight

A C of T is required in respect of the type of aircraft in which the flight is made and the capacity in which the licence holder is acting. The period of validity of C of T for this purpose is six months. However, where two C of Ts are held for the same type of aircraft and pilot capacity, the effective dates of which are separated by not less than four months, the period of validity is deemed to be 12 months from the effective date of the earlier certificate. The applicant must also meet the recency requirement as spelt in Air Navigation (121 — Commercial Air Transport By Large Aeroplanes) Regulations and Air Navigation (135 — Commercial Air Transport by Helicopters or Small Aeroplanes) Regulations, in order to exercise the privileges of his licence.

For flights involving MFF operations, a C of T is required in respect of the types of aircraft in which the flight is made and the capacity in which the licence holder is acting. The C of T shall be endorsed with the two aircraft types of the approved MFF Programme (e.g. A330/A340). The period of validity of the C of T is six months. However, where two C of Ts are held, the effective dates of which are separated by not less than four months, the period of validity is deemed to be 12 months from the effective date of the earlier certificate. The applicant must also meet the recency

requirement as spelt out in Air Navigation (121 — Commercial Air Transport By Large Aeroplanes) Regulations and Air Navigation (135 — Commercial Air Transport by Helicopters or Small Aeroplanes) Regulations, in order to exercise the privileges of his licence. The competency tests for the Certificates of Test shall alternate between the two aircraft types (e.g. A330/A340 and A340/A330).

Case C Aerial work flight

A C of T is required in respect of the type of aircraft in which the flight is made and the capacity in which the licence holder is acting is required, the period of validity of a C of T for this purpose is six months, but where two C of Ts are held for the same type of aircraft and pilot capacity, the dates of effect of which are separated by not less than four months, the period of validity is deemed to be 12 months from the date of effect of the earlier certificate.

A C of E may be issued if in the preceding six months not less than fifteen hours experience as PIC or co-pilot as appropriate to the capacity in which the licence holder is acting, in the type of aircraft in which the flight is made.

Note : An expired C of E will not be revalidated. The licence holder will be required to pass a flight test again in order to exercise the privileges of his licence.

Case D Any flight operating within the privileges of a PPL

A C of T is required in respect of the aircraft Class, Group and Type of which the test was carried out and in respect of the capacity in which the licence holder is acting. A C of T for a single-engine Group C type will revalidate Group A. A C of T for multi-engine Group C type will validate Groups A and B. This is provided the pilot has made at least 1 flight as PIC, one on each Group to be revalidated within the 12 months preceding the test.

Similarly, a C of T for a Group B aircraft will revalidate the Group A. This is provided he has made at least 1 flight as PIC in a Group A aeroplane within the 12 months immediately preceding the test. The period of validity of a C of T for this purpose is 12 months.

A C of E may be issued if within the preceding 12 months, at least 5 hours is flown as a pilot in an aircraft of the same Class as the rating in the licence. Of the 5 hours, a minimum of 2 hours must be of dual flying instruction under a flying instructor. Upon the completion of the dual flight(s), the instructor must certify the pilot a fit to fly as PIC in the logbook. Pilots wishing to revalidate more than one Class and Group of aeroplane must include at least 1 flight as PIC in an aeroplane of each Class and Group (or type in the case of Group C) as part or in addition of the overall minimum of 5 hours.

Note: An expired C of E will not be revalidated. The licence holder will be required to pass a flight test again in order to exercise the privileges of his licence.

- 17 Following an Aircraft Rating Test for inclusion of the first or additional aircraft types in the Aircraft Rating, either in Part I or Part II, the C of T will be endorsed with effect from the date on which all the items in the flight test were satisfactorily completed.
- 18 The DGCA may, at his discretion, exclude some items of the Aircraft Rating Test from subsequent tests on an aircraft already included in the rating. The required items shall be satisfactorily completed within a period of 21 days. On satisfactory completion of the test, the C of T will be signed in respect of the aircraft type in question by the DGCA or the AFE who conducted the test, effective from the date on which the test was completed.

MANDATORY MULTI-ENGINES CONVERSION TRAINING (AEROPLANES)

- 19 The holder of a Professional Pilot Licence wishing to have a first multi-engined propeller or turbine-jet aeroplane type included in the aircraft rating of a CPL will be required to carry out mandatory multi-engined conversion training.

THE AIRCRAFT RATING REQUIREMENTS - CPL(A)

- 20 A CPL(A) will not be issued unless the applicant has qualified for inclusion of at least one aeroplane type in the Aircraft Rating of the licence either in Part I or Part II. The privileges of the licence may only be exercised in an aircraft type specified in the Aircraft Rating.

THE AIRCRAFT RATING REQUIREMENTS - MPL(A)

- 21 An MPL(A) will not be issued unless the applicant has qualified for inclusion of at least one aeroplane type in the Aircraft Rating of the licence in Part II. The privileges of the licence may only be exercised in an aircraft type specified in the Aircraft Rating.

THE AIRCRAFT RATING REQUIREMENTS - ATPL(A)

- 22 An ATPL(A) will not be issued unless the applicant has qualified for inclusion of at least one multi-engine aeroplane type required to be operated with a co-pilot in the Aircraft Rating of the licence in Part I. The privileges of the licence may only be exercised in an aircraft type specified in the Aircraft Rating.
- 23 Where the applicant already holds a Singapore CPL(A), any aeroplane types already endorsed in the licence will be transferred to the ATPL(A) without him having to retake the ground examinations or the Aircraft Rating Tests for those aeroplane types. Valid C of T will be transferred from the CPL(A) to the ATPL(A) on issuance of the licence.

THE AIRCRAFT RATING REQUIREMENTS – CPL(H)

- 24 A CPL(H) will not be issued unless the applicant has qualified for inclusion of at least one helicopter type in the Aircraft Rating of the licence either in Part I and Part II. The privileges

of the licence may only be exercised in an aircraft type specified in the Aircraft Rating.

THE AIRCRAFT RATING REQUIREMENTS – ATPL(H)

- 25 An ATPL(H) will not be issued unless the applicant has qualified for inclusion of at least one helicopter type required to be operated with a co-pilot in the Aircraft Rating of the licence either in Part I and Part II. The privileges of the licence may only be exercised in an aircraft type specified in the Aircraft Rating.
- 26 Where the applicant already holds a Singapore CPL(H), any helicopter types already endorsed in the licence will be transferred to the ATPL(H) without him having to retake the ground examinations or the Aircraft Rating Tests for those helicopter types. Valid C of T will be transferred from the CPL(H) to the ATPL(H) on issuance of the licence.

CHAPTER 7 THE INSTRUMENT RATING (AEROPLANES)

THE INSTRUMENT RATING FLIGHT TEST

- 1 The privileges of the Instrument Rating (Aeroplanes) allow the holder to act in an aeroplane:
 - (a) on any flight as pilot-in-command (PIC) or co-pilot in controlled airspace or conditions such that the pilot cannot comply with the specified weather provisions;
 - (b) in circumstances which require compliance with Instrument Flight Rules;
 - (c) as PIC at night when passengers are carried or flying instruction is given where the specified recent night flying experience is satisfied;
 - (d) as PIC on a scheduled journey.
- 2 A CPL(A) may be issued without an Instrument Rating but its privileges will not include the privileges mentioned above in paragraph 1.
- 3 An ATPL(A) and MPL(A) will not be issued unless the applicant has qualified for inclusion in the licence of an Instrument Rating. Should the rating at any time become invalid, the privileges of the licence will be restricted accordingly.
- 4 The flight test for the Instrument Rating (Aeroplanes) is normally conducted in a multi-engine aeroplane, other than a centreline thrust aeroplane, as if it were being flown by a single flight crew member. This is regarded as the most demanding case and the privileges conferred by a rating gained as the result of such a test may be exercised in single-engine or multi-engine and single-crew or multi-crew aeroplanes.
- 5 An applicant for a flight test for the Instrument Rating (Aeroplanes) to be conducted in a multi-engine aeroplane, other than a centreline thrust aeroplane, must hold a current type or group rating on multi-engine aeroplanes, or have passed the flight test (or Group B rating flight test) in the previous 6 months. The applicant must provide documentary evidence of such a qualification prior to undertaking the flight test.
- 6 At the applicant's request, the test may be conducted in:
 - (a) a single-engine aeroplane. The rating will be endorsed accordingly and its privileges may be exercised only in single-engine aeroplanes;
 - (b) a multi-crew aeroplane. The rating will be endorsed accordingly and its privileges may be exercised only in aeroplanes certificated for two pilots. The test will normally be conducted only in aeroplanes requiring two pilots when flying for the purpose of public transport in compliance with the Instrument Flight Rules.

APPROVED TRAINING

- 7 Unless qualifying for exemption as detailed in paragraph 9, persons wishing to obtain an Instrument Rating (Aeroplanes) will, before they may take the Instrument Rating flight test, be required to complete an approved course of training. This will comprise:
- (a) for an unrestricted rating, not less than 40 hours dual instruction in instrument flying in single-engine or multi-engine aeroplanes, of which not less than 20 hours must be in multi-engine aeroplanes. The remaining experience, up to a maximum of 20 hours, may be gained in an approved flight simulation training device or an approved procedure trainer;
 - (b) for a rating with privileges restricted to single-engine aeroplanes, not less than 40 hours dual instruction in instrument flying. This must include not less than 20 hours in single-engine aeroplanes. The remaining experience, up to a maximum of 20 hours, may be gained in an approved flight simulation training device or an approved procedure trainer;
 - (c) for the holder of a rating restricted to single-engine aeroplanes applying to obtain an unrestricted rating, not less than ten hours dual instruction in instrument flying in multi-engine aeroplanes.
- 8 The experience gained on an approved course of training may be counted toward satisfying the experience requirements for the ratings as specified.

EXEMPTION FROM APPROVED TRAINING

- 9 Exemption from having to undergo an approved course of training will normally be given to the following:
- (a) Holders of a Singapore Instrument Rating (Helicopters)

Pilots who hold, or have held within the three years preceding the date of the application for the Instrument Rating (Aeroplanes), a Singapore Instrument Rating (Helicopters).
 - (b) RSAF pilots

Qualified serving pilots in the RSAF with a Green Rating who meet the experience specified in paragraph 11.

FLYING EXPERIENCE REQUIREMENTS

- 10 The normal method of recording flight time and the way in which it will be credited toward meeting the flying experience requirements is given in **Appendix B**.

- 11 The minimum flying experience required for grant of an Instrument Rating (Aeroplanes) is 200 hours as pilot of aeroplanes, which must include:
- (a) not less than 100 hours as PIC, of which not less than 50 hours must be cross-country flying; and
 - (b) not less than 40 hours as pilot by sole reference to instruments, of which up to 20 hours may be in an approved flight simulation training device or approved procedure trainer; and
 - (c) not less than 35 hours experience on multi-engine aeroplane, if the applicant wishes to obtain an Instrument Rating on a multi-engine aeroplane.
- 12 Where a pilot holds, or has held within the three years preceding the date of the application for the Instrument Rating (Aeroplanes), an Instrument Rating (Helicopters), the minimum experience required in aeroplanes is:
- (a) 50 hours as PIC, of which not less than 20 hours must be cross-country flying; and
 - (b) 20 hours as pilot by sole reference to instruments. Up to 10 hours of this may be in an approved aeroplane flight simulation training device.
- 13 Flight time in microlight aeroplanes, will not be counted toward satisfying any of the requirements specified in paragraphs 11 and 12 above. Flight time in self-launching motor gliders will not be counted toward satisfying the minimum PIC or pilot by sole reference to instruments requirements and may only be counted toward satisfying the total experience requirements specified in paragraph 11 when the aircraft is under power.

GROUND EXAMINATION REQUIREMENTS

- 14 Persons who have passed the ground examinations for grant of a professional pilot licence, or who have been exempted from having to take them, will not normally be required to take any ground examinations for grant of an Instrument Rating.

THE INITIAL INSTRUMENT RATING FLIGHT TEST

- 15 An applicant for the grant of an Instrument Rating (Aeroplanes) shall pass an Instrument Rating Flight Test. The test for an unrestricted rating shall be conducted in a multi-engine aeroplane certificated for single-pilot operation. The syllabus for the test comprises:

Section	1	:	Departure procedures
Section	2	:	Airways procedures
Section	3	:	ILS instrument approach procedures
Section	4	:	NDB, VOR or RNAV instrument approach procedures

Note: At the conclusion of Section 3, the applicant will be asked to carry out a missed approach from decision height in the course of which and at a safe height an engine failure will be simulated. Section 4 will be conducted on

asymmetric power and will terminate at minimum descent height after the applicant has levelled the aircraft and has given the CAAS Inspector or Authorised Flight Examiner an estimate of the time or distance to run to the aerodrome boundary, runway threshold or the facility, as appropriate.

Sub-section A : Preliminary and external checks

Sub-section B : Holding procedures

Sub-section C : Engine failure procedures

Sub-section D : Limited Panel

- 16 The full syllabus for the test, the conditions and assumptions upon which it will be conducted and the level of acceptable performance is spelt out in **Appendix D**.
- 17 The test syllabus for a rating restricted to multi-crew aeroplanes is the same as that for an unrestricted rating, but there may be minor variations in the conduct of the test. This will be explained by the CAAS Inspector or Authorised Flight Examiner before the test begins.
- 18 The test syllabus for a rating restricted to single-engine aeroplanes is the same as that given in paragraph 15, less Sub-section C and with no simulation of engine failure as referred to in the Note.
- 19 In the test for an unrestricted or single-engine rating, the applicant will be required to fly the aeroplane from the PIC position and to carry out the test as if he were the sole flight crew member. The CAAS Inspector or Authorised Flight Examiner will, however, be the designated PIC.
- 20 In the test for a multi-crew rating, the applicant may take the test as handling pilot in either the PIC or in the co-pilot position and will be expected to call upon the other flight crew members to assist him in the conduct of the flight in accordance with the normal crew drills for that type of aeroplanes. Whether the CAAS Inspector or Authorised Flight Examiner occupies the PIC or co-pilot position, he will be designated as PIC of the aeroplane. Where he does not occupy either of these positions, the pilot occupying either one of the seats who is not undergoing the test will be designated as PIC. He must be a person authorised by the operator of the aeroplane to act as a training or check captain on the type.
- 21 The applicant, together with the remainder of the flight crew in the case of a test on a multi-crew aeroplane, will be briefed by the CAAS Inspector or Authorised Flight Examiner before the test. The applicant will be responsible for ensuring that he has all equipment and documentation necessary for the planning and execution of the flight.
- 22 The route for the test flight will be chosen by the CAAS Inspector or Authorised Flight Examiner. It may start and finish at the same aerodrome or may end at another aerodrome. The applicant may not decline to fly the nominated route solely because he is not familiar with it. He should be prepared to be examined along any route terminating at a suitably equipped aerodrome within 150nm of departure.

The Combined GFT/IR Test

- 23 For students who have completed an abridged course of training for grant of a CPL(A) and Instrument Rating, the Instrument Rating flight test is combined with the General Flight Test. The combined GFT/IR Test is conducted to a syllabus approved by the DGCA. The student will be given all the information he needs concerning the test by the FTO which

carries out his training. Details are not included in this publication but may be obtained from the FTO.

INSTRUMENT RATING FLIGHT TEST : PASS CONDITIONS

- 24 Before an applicant may take the Instrument Rating flight test he must obtain a form, signed by a person authorised to sign such forms, certifying that he has satisfactorily completed any training which may have been required of him and that in the judgment of the person signing the form, he is fully ready to take the test. This requirement will apply whether or not the applicant has had to undergo an approved course of training. The form is valid for a period of 6 months from the date of signature and the first attempt to pass the test must be taken within this period of validity. If a partial pass is obtained during this period, then the form may be extended to allow the candidate to complete satisfactorily all the outstanding items within a period of 21 days from the date of first obtaining a partial pass. If the candidate fails to pass the test during this extended validity period, a new form is required.
- 25 All four sections and three sub-sections (two sub-sections in the case of a test in a single-engine aeroplane) of the test must be taken at the first attempt.
- 26 An applicant is required to demonstrate that he can satisfactorily complete in one flight any three sections of the four sections. He will be required to take the section that he has failed in his next attempt with the other failed items.
- 27 During a re-test, candidates will be re-tested in Section 1 (Departure Procedures). In addition, the applicant is required for operational reasons to take up a hold during the retest, he will be re-assessed on sub-section B.
- 28 Under the provisions of paragraphs 24 and 25, if an applicant has to take parts of the test again, he must satisfactorily complete all the outstanding items within a period of 21 days from the date of first test when obtaining the partial pass. If this is not achieved, the applicant will be required to take the whole flight test again.
- 29 If a candidate fails to achieve a valid pass in all sections and required sub-sections of the test within three attempts, he is required to meet the following prior to his first attempt in his second series of tests:
 - (a) complete in the six months preceding the date of the application for the first test in the second series such further training as the DGCA may prescribe;
 - (b) obtained a form signed by a person authorised to sign such forms certifying that the prescribed training has been satisfactorily completed and that the applicant is fully ready to take the test.
- 30 The first attempt in the second series will cover the whole test and the series will be subject to the same pass conditions as the first series. If, within three attempts at the test in the second series, the applicant has still not obtained a valid pass in all sections and required sub-sections of the test, he will, before he may start the third series of attempts, be required to:
 - (a) show that he has not less than 500 hours experience as pilot-in-command of aeroplanes;

- (b) complete in the six months preceding the date of the application for the first test in the third series, an approved course of training as specified by the DGCA.
 - (c) obtain a form signed by a person authorised to sign such forms, certifying that he has satisfactorily completed the required training and is fully ready to take the test.
- 31 The first two attempts at the test in the third series will be conducted subject to the same pass conditions as in the earlier series. However, if a third attempt is required, (regardless if it is within 21 days of the applicant having gained a partial pass) the applicant will have to take the whole test again.
- 32 If, at the conclusion of the third attempt in the third series, the applicant is unable to obtain a valid pass in all sections and required sub-sections of the test, he will be considered unsuitable to hold an Instrument Rating and will not normally be permitted to make any further attempts at the Instrument Rating test. The DGCA may, at his written request, review the circumstances and results of all the tests he has taken to determine whether any further attempt may be permitted. Any such further attempt, if allowed, would be subject to such conditions as the DGCA deemed fit.

TERMINATION OF A TEST BY THE APPLICANT

- 33 Once a test has started, should the applicant choose not to continue with it for reasons not considered adequate by the CAAS Inspector or Authorised Flight Examiner, he will be regarded as having failed those items not attempted in the test. Failure of the test on these grounds will be counted as an attempt.

TERMINATION OF A TEST BY THE CAAS INSPECTOR OR AUTHORISED FLIGHT EXAMINER

- 34 The CAAS Inspector or Authorised Flight Examiner may stop the test at any stage if he considers that the applicant standard of flying warrants a re-test.

FLIGHT TEST ARRANGEMENTS

- 35 Where an applicant for an Instrument Rating has undergone an approved course of training, arrangements for the flight test, including the provision of a suitable aircraft, will normally be made by the FTO which conducted the training.
- 36 Applicants who have been exempted from having to undergo an approved course of training will be required to make arrangements for the test acceptable to the DGCA. They must also make their own arrangements to provide an aircraft for the test. Such aircraft must be maintained and equipped to the requirements specified by the DGCA for the conduct of the test, including the method of ensuring that it can be flown by sole reference to instruments.

THE INSTRUMENT RATING CERTIFICATE OF TEST

- 37 The privileges of an Instrument Rating may not be exercised unless the licence contains a valid Certificate of Test (C of T). The period of validity of a C of T in relation to an

Instrument Rating is 12 months from the date of the completion of the test.

- 38 On grant of an Instrument Rating, the C of T will be endorsed on the licence, effective from the date on which the Instrument Rating Flight Test was successfully completed.
- 39 Before the certificate can be completed again the licence holder must pass a further test conducted by a CAAS Inspector or an Authorised Flight Examiner in an aircraft or an approved flight simulation training device. Access to such simulators can normally only be obtained through the operator who holds the simulator approval.
- 40 Any suitable means of simulating instrument flight conditions in an aeroplane may be used.
- 41 The test will comprise Section 1, Departure procedures, Section 2, Airways procedures, and a modified Section 3, ILS instrument approach procedure, consisting of an approach to land, go-around and missed approach procedures, Sub-section A, Preliminary and external checks, and Sub-section B, Holding procedures. Simulated failure of an engine and flight on asymmetric power will not be tested in Section 3.
- 42 A failure of more than one section of Sections 1, 2 and 3 will require the whole of the test to be taken again. If only one of these sections is failed, the CAAS Inspector or Authorised Flight Examiner, at his discretion, may ask the applicant to repeat the failed procedure during the course of the test. Should a further flight test be necessary only the failed section need be taken again except that where a retest of Section 3 is required it will start from the holding pattern and the candidate will be re-assessed on Sub-section B as well as Section 3. If, in the course of any other retest, the applicant is required for operational reasons to take up a hold, he will be re-assessed on Sub-section B. In a retest of Sub-section B, Section 1 will also be retested. If in the course of a retest a section or sub-section which has previously been passed is performed unsatisfactorily a retest in that section or sub-section will be required.
- 43 The whole of the test must be satisfactorily completed within 21 days from the initial attempt, or all passes gained will become invalid and the whole of the test must be taken again in one attempt, in accordance with the pass conditions as stated before.
- 44 On successful completion of the test, the C of T will be signed by the CAAS Inspector or Authorised Flight Examiner with an effective date from the date which the test was successfully completed.

TEST FOR REMOVAL OF THE MULTI-CREW OR SINGLE-ENGINE AEROPLANE RESTRICTION

- 45 The holder of an Instrument Rating valid for a multi-crew aeroplanes or for single-engine aeroplanes may have the restriction lifted by passing a flight test conducted by a CAAS Inspector or an Authorised Flight Examiner in an aeroplane of the type specified in paragraph 15 with the applicant acting as sole flight crew member. The arrangements to be observed for the test are as described in paragraph 15.
- 46 For lifting of the multi-crew restriction, the test will be conducted to the same syllabus and subject to the same pass conditions as that for an unrestricted rating. On the applicant passing the test, the restriction on the rating will be lifted and the C of T will be endorsed on

the licence, effective from the date on which the test was completed.

- 47 Before the test can be taken for removal of the single-engine aeroplane restriction, the applicant will, unless he is exempt under the terms of paragraph 9 be required to complete an approved course of training as specified in paragraph 7(c).
- 48 The test for removal of the single-engine restriction will be that described in paragraph 15 except Section 2 and Sub-section B, unless that if a holding procedure is required, the applicant will be assessed on it.
- 49 The single-engine restriction will be removed upon successful completion of the test. For the revalidation of the C of T, the applicant will also be required to pass Section 2, Airways procedures, and Sub-section B, Holding procedures. Applicants wishing to have these items included in the test should request it at the time of making the arrangement for the test.
- 50 A failure of more than one Section of Sections 1, 2 and 3 will require the whole test to be taken again. If only one of these sections is failed, the CAAS Inspector or Authorised Flight Examiner may require the applicant to repeat the failed section during the course of the test. Should another flight test be required, only the failed section need be taken again, except for Section 3 where the retest will start from the holding pattern and the candidate will be re-assessed on Sub-section B as well as on Section 3. If, in the course of any other re-test, the applicant is required for operational reasons to take up a hold he will also be re-assessed on Sub-section B. In a test of sub-section B, Section 1 will also be re-tested. If in the course of a re-test a section or sub-section which has previously been passed is performed unsatisfactorily a re-test in that section or sub-section may be required.
- 51 The whole of the test must be satisfactorily completed within 21 days from the initial attempt, or all previous passes will become invalid and the whole of the test must be taken again in one attempt, the pass conditions applying as before.

CHAPTER 8 THE INSTRUMENT RATING (HELICOPTERS)

THE INSTRUMENT RATING PRIVILEGES

- 1 The privileges of the Instrument Rating (Helicopters) allow the holder of a professional pilot licence (helicopters) to act in a helicopter:
 - (a) on any flight as pilot-in-command (PIC) or as co-pilot in controlled airspace or conditions such that the pilot cannot comply with the specified weather provisions;
 - (b) in circumstances which require compliance with Instrument Flight Rules;
 - (c) as pilot-in-command (PIC) at night when passengers are carried or flying instruction is given, where the specific recent night flying is satisfied;
 - (d) as PIC on a scheduled journey.
- 2 The rating will be granted only in respect of helicopters having a Singapore Certificate of Airworthiness which permits unrestricted flight in Instrument Meteorological Conditions and will be granted in respect only of those helicopters upon which the licence holder has passed an Instrument Rating flight test.
- 3 A CPL(H) or an ATPL(H) may be issued without it having to include an Instrument Rating but the licence privileges will not extend to flights under the circumstances detailed above.

APPROVED TRAINING

- 4 Unless qualifying for exemption as detailed in paragraph 6, persons wishing to obtain an Instrument Rating (Helicopters), will before they may take the Instrument Rating flight test, be required to complete an approved course of training. This will comprise:
 - (a) 20 hours dual instruction in instrument flying in helicopters, not less than five hours of which must be in the type in which the applicant wishes to qualify. The remainder may be in any helicopter having Singapore Certificate of Airworthiness which permits instrument flight training.
 - (b) 20 hours instruction in instrument flying in an approved helicopter flight simulation training device or an approved procedure trainer. Up to 10 hours of this training may alternatively be conducted in an aeroplane.
- 5 The experience gained on an approved course of training may be counted toward satisfying the experience requirements for the rating as specified in paragraph 8.

EXEMPTION FROM APPROVED TRAINING

6 Exemption from having to undergo an approved course of training will normally be given to the following:

(a) Holders of a Singapore Instrument Rating (Aeroplanes)

Pilots who hold, or have held within the three years preceding the date of the application for the Instrument Rating (Helicopters), a Singapore Instrument Rating (Aeroplanes).

(b) RSAF pilots

Qualified serving pilots in the RSAF who meet the experience requirements specified in paragraph 8.

FLYING EXPERIENCE REQUIREMENTS

7 **Appendix B** sets out the way in which flight time will be counted toward meeting the flying experience requirements.

8 The minimum flying experience required for grant of an Instrument Rating (Helicopters) to a pilot who does not already hold an Instrument Rating (Aeroplanes) is 200 hours as pilot of helicopters, which must include:

(a) not less than 100 hours as PIC. This PIC time may include up to 65 hours as co-pilot acting as pilot-in-command under supervision (PIC U/S) provided that the applicant has not less than 250 hours as pilot of helicopters. The PIC experience must include not less than 50 hours cross-country flying;

(b) not less than 40 hours as pilot by sole reference to instruments. Up to 20 hours of this time may be in an approved helicopter flight simulation training device, including up to 10 hours in an approved procedure trainer;

(c) not less than 5 hours as pilot by sole reference to instruments in the type of helicopter in respect of which the applicant wishes to qualify. These hours must be gained in flight. They may be counted toward the requirement specified in paragraph 8(b).

9 Where a pilot holds, or has held within the three years preceding the date of the application for the Instrument Rating (Helicopters), an Instrument Rating (Aeroplanes), the minimum experience required in helicopter is:

(a) not less than 50 hours as PIC, of which not more than 15 hours may be as PIC U/S, including not less than 20 hours cross-country flying;

(b) not less than 20 hours as pilot by sole reference to instruments, of which not more than 10 hours of this may be in an approved helicopter flight simulation training device, including not more than 5 hours in an approved procedure trainer.

- (c) not less than 5 hours as pilot by sole reference to instruments in the type of helicopter in which the applicant wishes to qualify. This time must be gained in flight. It may counted toward that required by paragraph 9(b) above.

GROUND EXAMINATION REQUIREMENTS

- 10 Persons who have passed the ground examinations for grant of a professional pilot licence, or who have been exempted from having to take them, will not normally be required to take any ground examinations for grant of an Instrument Rating.

THE INSTRUMENT RATING FLIGHT TEST

- 11 All applicants for the grant of an Instrument Rating (Helicopters) will be required to pass, on the first type of helicopter to which the rating will apply, an Instrument Rating flight test conducted by a CAAS Inspector or an Authorised Flight Examiner. Further tests will be required to extend rating privileges of other types of helicopters. (See paragraphs 22 to 25).
- 12 The test for grant of the rating is conducted subject to the same conditions as that for the Instrument Rating (Aeroplanes) except that where it is conducted in a multi-engine helicopter, an engine failure will be simulated during the missed approach following Section 3 or Section 4 whichever is flown first at the discretion of the CAAS Inspector or Authorised Flight Examiner. The following section will then be conducted under simulated engine failure conditions.
- 13 The syllabus of the test, the conditions and assumptions upon which it will be conducted and the level acceptable performance is similar to that of the Instrument Rating flight test for aeroplanes (See **Appendix D**).
- 14 Where the test is conducted in a helicopter having a Certificate of Airworthiness which permits it to be flown by a sole flight crew member, the applicant will be expected to act as sole flight crew member. He will occupy the PIC position but the CAAS Inspector or Authorised Flight Examiner will be the designated PIC.
- 15 Where the test is conducted in a helicopter requiring it to be flown by more than one pilot, the applicant may take the test as handling pilot in either the PIC or co-pilot position, and will be expected to call upon the other pilot to assist him in the conduct of the flight in accordance with the normal crew drills for that type of helicopter. Where the CAAS Inspector or Authorised Flight Examiner occupies the PIC or co-pilot position, he will be the designated PIC. Where he does not occupy either of these positions, the pilot occupying either one who is not undergoing the test will be designated as PIC and must be a person authorised by the operator of the helicopter to act as a training or check captain on the type.

INSTRUMENT RATING FLIGHT TEST: PASS CONDITIONS

- 16 The flight test pass conditions for grant of the Instrument Rating (Helicopters) are the same as those for the Instrument Rating (Aeroplanes).
- 17 If the applicant has to go a third series of attempts at the test, he will, before the he make the first attempt in the series, be required to:

- (a) show that he has not less than 500 hours experience as PIC of helicopters;
- (b) complete in the six months preceding the date of the application for the test, an approved course of training as specified by the DGCA.
- (c) obtain a form signed by an authorised person certifying that he has satisfactory completed the required training and is fully ready to take the test again.

FLIGHT TEST ARRANGEMENTS

- 18 The flight test arrangements for grant of the Instrument Rating (Helicopters) are the same as those for the Instrument Rating (Aeroplanes).

THE INSTRUMENT RATING CERTIFICATE OF TEST

- 19 The privileges of an Instrument Rating (Helicopters) may only be exercised in those types of helicopters in respect of each of which the licence contains a valid Certificate of Test (C of T). The period of validity of a C of T in respect of each type of helicopter is 12 months from the date of effect from the certificate in relation to that type.
- 20 For the grant of an Instrument Rating, the C of T endorsed on the licence in respect of the type of helicopters on which the test was taken will be effective from the date on which the Instrument Rating flight test was successfully completed.
- 21 The flight test arrangements in respect of the C of T, the syllabus for the test and the pass conditions are the same as those for the aeroplane rating. A test must be taken in respect of each type of helicopter for which a C of T is required, but the Airways procedures section of the test, Section 2, need only be taken once every 12 months.

FLIGHT TEST TO EXTEND THE RATING PRIVILEGES TO ADDITIONAL TYPES OF HELICOPTERS

- 22 To extend the Instrument Rating privileges to additional types of helicopters, the licence holder will be required to pass a further test on each of the types for which the extension is sought.
- 23 Before the flight test may be taken, the applicant will be required to have obtained not less than two hours as pilot by sole reference to instruments on the type of helicopter in which the test is to be taken, or in an approved helicopter flight simulation training device representative of the type.
- 24 If a first multi-engine helicopter Instrument Rating is to be included, the test will be as detailed as paragraph 12 above less Section 2 and Sub-section B, except that if a holding

procedure is operationally necessary, the applicant will be assessed on it. For other cases the test will comprise Section 1 and Section 3 but if a holding procedure is operationally necessary, the applicant will be assessed on it. Every such flight test must be conducted in a helicopter.

- 25 On satisfactory completion of the flight test, the additional helicopter type will be added to the aircraft rating. The C of T endorsed on the licence in respect of that type will be effective from the date on which the test was successfully completed.

INTENTIONALLY
LEFT BLANK

CHAPTER 9 VALIDATION OF A FOREIGN PILOT LICENCE

APPLICABILITY

- 1 Pursuant to paragraph 21 of the ANO, an applicant may, in lieu of holding a Singapore pilot licence, apply to validate his foreign pilot licence to allow him to operate a Singapore-registered aircraft.
- 2 The requirements set out in this chapter apply to holders of a foreign pilot licence who wish to validate their foreign pilot licence to operate a Singapore-registered aircraft.

PREREQUISITES

- 3 An applicant for a validation of a foreign pilot licence shall:
 - (a) hold a valid and appropriate pilot licence issued by an ICAO Contracting State in accordance with ICAO Annex 1;
 - (b) hold a valid medical certificate of the appropriate medical class of assessment;
 - (c) hold a valid Flight Radiotelephony Operator Licence;
 - (d) hold a valid ICAO Language Proficiency endorsement of at least Operational Level (Level 4); and
 - (e) the prerequisites stated in paragraph 5 for the specific purpose(s) sought.
- 4 The foreign pilot licence including the associated ratings and authorisations presented for the application for the Certificate of Validation shall be issued by the same licensing authority. A combination of ratings and authorisations issued by different authorities will not be accepted for the application of a Certificate of Validation.

PURPOSE OF VALIDATION AND CORRESPONDING PREREQUISITES

- 5 An applicant may apply to validate his foreign pilot licence for the following purposes provided he meets the corresponding prerequisite(s):

Purpose	Prerequisite(s)
(a) To carry out private flights in a Singapore-registered aircraft.	A pilot licence with PPL privileges for the relevant class or aircraft rating. Pass at least the PPL Air Law and Operational Procedures examination.
(b) To carry out aircraft delivery and ferry flights in a Singapore-registered aircraft.	An appropriate pilot licence with the relevant class or aircraft rating.
(c) To undergo training in a Singapore-registered aircraft.	An appropriate pilot licence.
(d) To conduct flying tests in a Singapore-registered aircraft on behalf of the DGCA.	An appropriate pilot licence with any form of authorisation issued by or provided for by the foreign authority which allows the holder to conduct the requested flying tests.
(e) To conduct flight training in a Singapore-registered aircraft on behalf of an operator.	An appropriate pilot licence with the required instructor privileges.
(f) To conduct line training or line checks on behalf of an operator of a Singapore-registered aircraft inducting a new aircraft type.	An appropriate pilot licence with the required privileges to carry out the purpose.
(g) To operate a Singapore-registered aircraft to: <ul style="list-style-type: none"> (i) enable the aircraft to qualify for the issue of a Certificate of Airworthiness; or (ii) enable the aircraft to qualify for the approval of a modification of the aircraft; or (iii) experiment with or test the aircraft and its equipment; or (iv) proceed to or from a place at which any experiment, test, inspection or weighing of the aircraft is to take place for a purpose referred to in 5(g) (i), (ii) and (iii). 	An appropriate pilot licence with the required privileges to carry out the purpose.

- 6 An applicant may not apply to validate his foreign pilot licence for any other purposes except

those stated in paragraph 5.

- 7 Notwithstanding anything in this chapter, the applicant may be required to meet additional requirements as the DGCA deems fit.

VALIDITY OF THE CERTIFICATE OF VALIDATION

- 8 Subject to the validity period of the foreign pilot licence, the maximum period of validity of the Certificate of Validation shall be as follows:
- (a) Three months in the case of a visiting pilot wishing to carry out private flights in Singapore; or
 - (b) Six months, for the other purposes specified in paragraph 5.

CONDITIONS AND LIMITATIONS

- 9 The holder of a Certificate of Validation shall carry with him the foreign licence on which the validation is based on, in order to exercise the privileges of the validation.
- 10 The holder of a Certificate of Validation shall only operate the aircraft for the purpose(s) stated in his certificate regardless of the privileges contained in his foreign licence.
- 11 The holder of a Certificate of Validation shall not carry out any of the purposes mentioned in paragraph 5 on a public transport flight except for 5(f) provided the pilot undergoing the line training or line check already holds a valid Aircraft Rating of the aircraft type.

REAPPLICATION FOR THE CERTIFICATE OF VALIDATION

- 12 The Certificate of Validation may not be renewed or extended. An applicant who wishes to revalidate his foreign pilot licence is required to reapply for the Certificate of Validation. The reissue of the certificate is based on the sole discretion of the DGCA.

INTENTIONALLY
LEFT BLANK

CHAPTER 10 REQUIREMENTS FOR THE RENEWAL OF A LAPSED AIRCRAFT RATING OR INSTRUMENT RATING

INTRODUCTION

- 1 The holder of a Singapore professional pilot licence should maintain continuity of his licence and its associated ratings by:
 - (a) renewing his medical examination with a Designated Medical Examiner or CAMB at the appropriate intervals to ensure continuity of the validity of his licence and Medical Certificate.
 - (b) undergoing flight tests at the appropriate intervals to maintain the privileges of his aircraft type(s) and Instrument Rating as specified in the ANO.
 - (c) renewing the holder's Certificate of Experience (C of E) if the holder flies for the purpose of aerial work or any purpose other than for the purpose of public transport by producing evidence of having carried out within the preceding 6 months, not less than 15 hours flying as pilot-in-command or co-pilot in an aircraft of the type or class to which the type rating relates

- 2 The passing of the medical examination for the issue or renewal of a licence itself does not entitles the holder to exercise the privileges of his licence unless the holder also holds a valid Certificate of Test (C of T) or Certificate of Experience for the Aircraft Rating specified in his licence.

RENEWAL OF A LAPSED AIRCRAFT RATING

- 3 Depending on the period the Aircraft Rating has lapsed, the licence holder shall complete the following applicable requirements to renew the lapsed Aircraft Rating:

Period of Lapse	Examination Requirements	Minimum Requirements of a Training Programme for an Aircraft Type of:		Flying Test Requirements for Aircraft Type of:	
		MTMA ≤5700kg	MTMA >5700kg	MTMA ≤5700kg	MTMA >5700kg
(a) Not exceeding a year	-	-	-	Aircraft Rating Test	Renewal Aircraft Rating Test
(b) More than a year but not exceeding 5 years	-	-	Approved Abbreviated Reactivation Programme	Aircraft Rating Test	Renewal Aircraft Rating Test
(c) More than 5 years but not exceeding 10 years	1. Air Law 2. Operational Procedures 3. Human Performance (if not passed before) 4. Aircraft Type Technical Examination	-	Approved Reactivation Programme (Shortened Type Rating Course)	1. General Flight Test 2. Aircraft Rating Test	Initial Aircraft Rating Test
(d) More than 10 years	1. Theoretical knowledge examinations at the appropriate level i.e. CPL or ATPL 2. Aircraft Type Technical Examination	Full Type Rating Course	Approved Full Type Rating Course	1. General Flight Test 2. Aircraft Rating Test	Initial Aircraft Rating Test

Note: The test syllabus for the Renewal Aircraft Rating Test is stated in paragraph 4.5, Chapter 4 of the SASP Part 7.

- 4 For paragraph 3(c), the licence holder may be exempted from passing the Air Law and Operational Procedures Examinations if he has exercised the privileges of his Singapore Licence within the last 5 years.
- 5 For paragraph 3(d), the licence holder may be exempted from passing all the Theoretical Knowledge Examinations if he has exercised the privileges of his Singapore Licence within the last 5 years.
- 6 For paragraphs 3(c) and 3(d), the licence holder may be eligible to complete the entire Initial Aircraft Rating Test in an approved flight simulation training device provided he was exercising the privileges of his Singapore or foreign licence within the last 5 years and meets the prerequisites of the approved programme.
- 7 Notwithstanding paragraph 3, if the licence holder is current on the aircraft type by exercising the privileges of a foreign licence, the DGCA may waive certain requirements, either absolutely or subject to conditions as he deems fit.
- 8 For the purpose of paragraph 7, “current” means the licence holder:
 - (a) is currently rated on the aircraft type sought in the foreign licence;
 - (b) has completed at least 4 commercial operations in the aircraft type sought in the 12 months immediately preceding the date of application;
 - (c) has completed 2 proficiency checks of the aircraft type sought (in an aircraft or flight simulation training device approved by the foreign Civil Aviation Authority) in the 12 months immediately preceding the date of application. The 2 proficiency checks shall not occur within a period of four months. At least one of 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 foreign operator; and
 - (d) has operated the flight controls of the aircraft type sought during at least three take-offs and landings in the 90 days immediately preceding the date of application, in an aircraft or a flight simulation training device approved by the foreign Civil Aviation Authority.

RENEWAL OF A LAPSED INSTRUMENT RATING

- 9 When the period of validity of an Instrument Rating has lapsed within 12 months, the flight test may be carried out in accordance with the renewal flight test requirements.
- 10 If a period of more than 12 months has lapsed since the expiry of the C of T, the licence holder will be required, before the C of T can be revalidated, to pass a full instrument Rating Flight Test. On successful completion of the test, the C of T endorsed on the licence will be effective from the date on which the test was completed. When a licence holder has remained in instrument flying practice on a foreign licence or in active flying with the RSAF, the DGCA may waive this requirement, either absolutely or subject to conditions as he thinks fit.

INTENTIONALLY
LEFT BLANK

CHAPTER 11 CONVERSION OF A FOREIGN PROFESSIONAL PILOT LICENCE

APPLICABILITY

- 1 The terms set out in this chapter applies to holders of a foreign professional pilot licence who wish to apply for a licence conversion to a Singapore equivalent.

PREREQUISITES

- 2 An applicant for a professional pilot licence conversion shall meet the following pre-requisites:
 - (a) The applicant shall meet the minimum and maximum age limits specified in the Air Navigation Order;
 - (b) The applicant shall hold a valid professional pilot licence issued by an ICAO Contracting State in accordance with ICAO Annex 1;

Note: The list of ICAO Contracting States can be obtained from the ICAO website at <http://www.icao.int>.

- (c) The Medical Certificate, pilot licence and its associated ratings shall be issued by the same licensing authority. The applicant shall ensure that the foreign Medical Certificate and pilot licence remain valid from the point of application for licence conversion until the grant of the Singapore licence;

Note: Applicants are advised to have at least six months' validity on their foreign Medical Certificate and pilot licence at the point of application for licence conversion.

- (d) The applicant shall produce evidence of having passed the appropriate theoretical knowledge examinations prescribed by the foreign licensing authority, for the respective class of licence being sought. These theoretical knowledge examinations shall have been taken with the same licensing authority that issued the foreign licence being presented for conversion;

Note: (1) In the case of a foreign licence presented for conversion that was converted from a previous licence, the DGCA may require the applicant to submit the previous licence with the supporting examination results taken with the previous licensing authority, which must be from an ICAO Contracting State.

- (2) An applicant for a Singapore CPL who has passed the theoretical knowledge examinations prescribed by the foreign licensing authority at the CPL level will be restricted to single-pilot operations. Such applicants, if intending to operate in a multi-crew environment, will need to pass the theoretical knowledge examinations at the ATPL level to have the restriction lifted.

- (e) The applicant shall hold a valid Radiotelephony Licence from the foreign licensing

authority, unless the privileges of the foreign licence include radiotelephony communication;

- (f) The applicant shall produce evidence of having completed at least one proficiency check or flight test in the 12 months immediately preceding the date of application. The check or the test shall be carried out by the foreign Civil Aviation Authority (CAA) or its authorised representative;
- (g) The applicant shall demonstrate the need to hold a Singapore professional pilot licence; and

Note: Such demonstration may be by a letter from a Singapore operator, approved aviation training organisation or flying club indicating prospective employment in a flying capacity.

- (h) An applicant for a CPL(A) with less than 700 total flying hours as pilot of aeroplanes shall produce evidence demonstrating that he has completed a course of flying training approved by the foreign CAA.

FLYING EXPERIENCE REQUIREMENTS

- 3 An applicant for a professional pilot licence conversion shall meet the flying experience requirements for the respective class of licence which he wishes to qualify.

Note: Foreign military flying hours will not be counted towards satisfying the flying experience requirements for licence conversion.

Commercial Pilot Licence (Aeroplanes)

- 4 To qualify for a CPL(A), the applicant shall hold a valid foreign CPL(A) or ATPL(A) and have completed a minimum of 200 total flying hours as pilot of aeroplanes, which shall include at least:

- (a) 100 hours as pilot-in-command (PIC) of aeroplanes of which at least 20 hours shall be cross-country or overseas flying including one flight of at least 300 nautical miles, in the course of which the aeroplane landed and came to rest at not less than two intermediate aerodromes;
- (b) 10 hours of night flying as pilot-in-command (PIC) or pilot-under-training (P U/T) of aeroplanes, of which at least 5 hours shall be as pilot-in-command (PIC). This night flying experience shall include at least 10 take-offs and 10 landings without assistance; and
- (c) 10 hours of instrument flying as pilot-in-command (PIC) or pilot-under-instruction (P U/T) of aeroplanes.

Note: Flight time in microlight aeroplanes, or in self-launching motor gliders, will not be counted towards satisfying the above requirements.

Commercial Pilot Licence (Aeroplanes) with Instrument Rating

- 5 To qualify for a CPL (A) with an Instrument Rating (IR), the applicant shall hold a valid foreign CPL(A) or ATPL(A) with a valid IR. The applicant shall have completed a minimum of 200 total flying hours as pilot of aeroplanes which shall include at least:
- (a) 100 hours as pilot-in-command (PIC) of aeroplanes, of which at least 50 hours shall be cross-country or overseas flying including one flight of at least 300 nautical miles, in the course of which the aeroplane landed and came to rest at not less than two intermediate aerodromes;
 - (b) 10 hours of night flying as pilot-in-command (PIC) of pilot-under-training (P U/T) of aeroplanes, of which at least 5 hours shall be as pilot-in-command (PIC). This night flying experience shall include at least 10 take-offs and 10 landings without assistance;
 - (c) 40 hours of instrument flying, of which, 10 hours shall be as P U/T;
 - (d) For an instrument rating with privileges restricted to single-engine aeroplanes, at least 30 hours of the 40 hours of instrument flying required in (c) shall be in single-engine aeroplanes;
 - (e) For an unrestricted instrument rating:
 - (i) at least 20 hours of the 40 hours of instrument flying required in (c) shall be in multi-engine aeroplanes; and
 - (ii) 35 hours experience in multi-engine aeroplanes (whether or not under instrument flying).

Note 1: For the requirement of 40 hours instrument flying stated in paragraph 5(c), up to 20 hours may be instrument ground time as pilot-under-training (P U/T) or 30 hours as pilot-under-training (P U/T) if conducted in an approved Full Flight Simulator.

Note 2: Flight time in microlight aeroplanes, or in self-launching motor gliders will not be counted towards satisfying the above requirements.

Airline Transport Pilot Licence (Aeroplanes)

- 6 To qualify for an ATPL(A), the applicant shall:
- (a) hold a valid foreign ATPL(A) or a valid Singapore CPL(A) that was converted from a foreign professional pilot licence;
 - (b) hold a valid Instrument Rating (IR);
 - (c) meet the qualifying requirements, as pilot-in-command, for the inclusion of at least one multi-engine aeroplane type required to be operated with a co-pilot in the Aircraft Rating; and
 - (d) have completed a minimum of 3000 total flying hours as pilot of aeroplanes,

consisting of at least:

- (i) 250 hours as pilot-in-command (PIC) of aeroplanes, of which up to a maximum of 150 hours may be as co-pilot acting as pilot-in-command under supervision (PIC U/S);
- (ii) 200 hours of cross-country or overseas flying, of which at least 100 hours shall be as PIC or PIC U/S on aeroplanes, of which at least 50 hours shall be as PIC. This shall include a flight of at least 300 nautical miles acting as PIC in the course of which the aeroplane landed and came to rest at not less than 2 intermediate aerodromes;
- (iii) 100 hours of night flying in aeroplanes, as PIC, PIC U/S or as co-pilot (P2), of which at least 25 hours shall be on cross-country or overseas flying as PIC or PIC U/S including two flights terminating at an aerodrome not less than 65 nautical miles from the point of departure. This night flying shall include at least 5 hours and 10 take-offs and 10 landings as PIC;
- (iv) 75 hours of instrument flying, of which 10 hours shall be as P U/T and 20 hours shall be in multi-engine aeroplanes. Up to 20 hours may be instrument ground time as pilot-under-training (P U/T) or 30 hours as pilot-under-training (P U/T) if conducted in an approved Full Flight Simulator; and
- (v) 500 flying hours on civil registered multi-engine transport aeroplanes certificated for operation with a minimum crew of at least two pilots.

Note: Flight time in microlight aeroplanes, or in self-launching motor gliders, will not be counted towards satisfying the above requirements.

Commercial Pilot Licence (Helicopters)

- 7 To qualify for a CPL(H), the applicant shall hold a valid foreign CPL(H) or ATPL(H) and have completed at least:
- (a) 400 total flying hours as pilot-in-command (PIC) of helicopters of which at least 10 hours shall be cross-country or overseas flying, including a flight in the course of which landing at 2 different points shall be made;
 - (b) 5 hours of night flying as pilot-in-command (PIC) of helicopters which shall include not less than 5 take-offs and 5 landing patterns; and
 - (c) 10 hours of instrument flying as pilot-under-training (P U/T) of helicopters of which not more than 5 hours may be instrument ground time.

Commercial Pilot Licence (Helicopters) with Instrument Rating

- 8 To qualify for a CPL(H) with an Instrument Rating(IR), the applicant shall hold a valid foreign CPL(H) or ATPL(H) with a valid IR. The applicant shall have completed at least:
- (a) 400 hours total flying as PIC of helicopters, of which at least 50 hours shall be cross-country or overseas flying, including a flight in the course of which landing a flight in the course of which landing at 2 different points shall be made;
 - (b) 5 hours of night flying as PIC of helicopters which shall include not less than 5 take-offs and 5 landing patterns; and
 - (c) 40 hours of instrument flying as P U/T of helicopter, which shall include at least 5 hours gained in flight in the type of helicopter which the applicant wishes to qualify.

Airline Transport Pilot Licence (Helicopters) with Instrument Rating

- 9 To qualify for an ATPL(H) with an Instrument Rating(IR), the applicant shall:
- (a) hold a valid foreign ATPL(H) or a valid Singapore CPL(H) that was converted from a foreign professional pilot licence;
 - (b) hold a valid IR;
 - (c) meet the qualifying requirements, as pilot-in-command, for the inclusion of at least one helicopter type required to be operated with a co-pilot in the Aircraft Rating; and
 - (d) have completed a minimum of 1,000 total flying hours as pilot of helicopters, consisting of at least:
 - (i) 400 hours as pilot-in-command (PIC),
 - (ii) 200 hours of cross-country or overseas flying, of which at least 100 hours shall be as PIC including a flight in the course of which landing at 2 different points shall be made;
 - (iii) 50 hours of night flying, of which at least 5 hours shall be as PIC which shall include not less than 5 take-offs and 5 landing patterns. The remaining night flying experience shall be made up of co-pilot (P2) hours; and
 - (iv) 40 hours of instrument flying as pilot-under-training (P U/T) of helicopters, which shall include at least 5 hours gained in flight in the type of helicopter which the applicant wishes to qualify.

ADDITIONAL CONVERSION REQUIREMENTS

Medical Standards

- 10 The applicant shall pass the Class 1 Medical Examination as specified in the Fourteenth Schedule of the ANO and SASP 9.

Language Proficiency Requirements

- 11 The applicant shall demonstrate the ability to speak and understand English language used for radio-telephony communications. He shall be required to have at least the Operational Level (Level 4) of the ICAO Language Proficiency Rating Scale to exercise the privileges of his Singapore professional pilot licence.
- 12 The applicant shall be assessed for his language proficiency in order to convert his foreign licence. This language proficiency assessment shall only be performed by the DGCA or persons authorised by the DGCA.

Ground Examination Requirements

- 13 The applicant shall pass the following knowledge examinations for the issue of a Singapore professional pilot licence:
- (a) Air Law;
 - (b) Operational Procedures;
 - (c) Human Performance, unless the applicant produces documentary evidence (e.g. result slip or letter from the foreign licensing authority) to show a pass in an equivalent subject;
 - (d) Performance, unless the applicant produces documentary evidence (e.g. result slip or letter from the foreign licensing authority) to show a pass in an equivalent subject at the appropriate level. For conversion to an ATPL(A), the applicant may be exempted from this subject; and
 - (e) Aircraft Type Technical examination for the aircraft rating to be endorsed on the Singapore licence, unless the applicant is current.
- 14 Notwithstanding paragraph 13, an applicant for a CPL (A) who does not meet any one of the following requirements shall be required to pass all the theoretical knowledge examinations at appropriate level:
- (a) At least 700 total flying hours as pilot of aeroplanes;
 - (b) At least 200 hours as pilot-in-command (PIC) of aeroplanes of which up to a maximum of 100 hours may be as co-pilot acting as pilot-in-command under supervision (PIC U/S); or
 - (c) At least 10 hours of cross-country or overseas flying as pilot-in-command (PIC) of aeroplanes by night or by sole reference to instruments. Any instrument flight time

counted towards satisfying this requirement may not also be counted towards satisfying that specified in paragraphs 4 and 5.

Instrument Rating Test Requirements

- 15 An applicant for the grant of an IR on the Singapore professional pilot licence shall be required to pass the IR test, conducted by the DGCA or an Authorised Flight Examiner, in an aircraft.

Note: The IR test on an aircraft having a maximum total mass authorised of more than 5,700kg may be completed in a DGCA approved flight simulation training device.

Aircraft Rating

- 16 The applicant is required to complete, for each aircraft type having a maximum total mass authorised of less than 5,700kg to be endorsed on the Singapore licence, a training program approved by the DGCA, which shall include, but is not limited to, ground instruction on the Aircraft Type, Aircraft Training and the Aircraft Rating Flight Test.

- 17 For an aircraft having a maximum total mass authorised of more than 5,700kg, the applicant shall meet the following qualifying requirements for the inclusion of the aircraft rating:

Qualifying Conditions	Ground Instruction on Aircraft Type	Flight Simulator Training	Aircraft Training*	Items to be tested in flight as part of the Aircraft Rating Flight Test
(a) Pilot has \geq 500 hours and is current for the aircraft type sought.	Not required	Minimum 2 sessions required	Not required	To be completed in an aircraft or a DGCA approved flight simulation training device
(b) Pilot has $<$ 500 hours and is current for the aircraft type sought.	Not required	Minimum 3 sessions required	Not required	To be completed in an aircraft or a DGCA approved flight simulation training device
(c) Pilot not current ($<$ 5 years lapse) for the aircraft type sought.	Required	Minimum 4 sessions required	Required	To be completed in an aircraft
(d) Pilot with no previous experience in aircraft type sought or not current (\geq 5 years lapse)	Required	Full aircraft conversion required	Required	To be completed in an aircraft

***Note:** The Aircraft Training may be substituted by a Zero Flight Time Training programme approved by the DGCA.

- 18 For the purpose of paragraphs 13 and 17, “current” means the pilot:

- (a) is currently rated on the aircraft type sought in the foreign licence;
- (b) has completed at least 4 commercial operations in the aircraft type sought in the 12 months immediately preceding the date of application;
- (c) has completed 2 proficiency checks of the aircraft type sought (in an aircraft or flight simulation training device approved by the foreign Civil Aviation Authority) in the 12 months immediately preceding the date of application. The 2 proficiency checks must not occur within a period of four months. At least one of these proficiency checks must have been carried out by the foreign CAA or its authorised representative, while the other may be carried out by the foreign operator; and
Note: The proficiency check used to satisfy the pre-requisite specified paragraph 2(f) may be counted towards satisfying this requirement.
- (d) has operated the flight controls of the aircraft type sought during at least three take-offs and landings in the 90 days immediately preceding the date of application, in an aircraft or a flight simulation training device approved by the foreign Civil Aviation Authority.

- 19 For the purpose of paragraph 17, one session of simulator training shall consist at least four hours of simulator training.
- 20 Notwithstanding anything in this Chapter, an applicant may be required to meet any additional conversion terms as the DGCA deems fit.

CHAPTER 12 SPECIAL LICENSING REQUIREMENTS FOR RSAF PILOTS

1 APPLICATION

- 1.1 The licensing requirements spelt out in this chapter apply only to Republic of Singapore Air force (RSAF) pilots who are in current flying practice in military aircraft. Foreign military pilots will not be accepted for licence conversion. Current flying practice in military aircraft is to be interpreted as having flown at least 50 hours as first pilot according to military procedures during the 12 months preceding the date of assessment for a licence. A RSAF pilot who is not in current flying practice will not be entitled to any special licensing terms as set out in this chapter and must meet the standard requirements as set out elsewhere in this publication.
- 1.2 The general information, application procedures and the medical requirements contained in Chapter 1 and 2 of this publication are also applicable to all RSAF pilots applying for a Singapore licence.

2 REQUIREMENTS (POLICY)

- 2.1 The licensing policy for RSAF pilots is based upon the testing of their skills as a pilot in Chapters 5, 6 and 7. An applicant shall pass the appropriate ground examinations, with the exception of the RT theory and practical examination, for the issue of a licence.

3 RECOGNITION OF MILITARY QUALIFICATIONS

- 3.1 The flying hours accumulated by RSAF pilots during their military services will be credited. However, RSAF pilots are required to attend a further course of approved flying training before they can be accepted for flight tests conducted by a CAAS Inspector or an Authorised Flight Examiner for the issue of a professional pilot licence.

4 REQUIREMENT FOR APPROVED TRAINING

- 4.1 In addition to meeting the minimum flying requirements as spelt out in Chapter 4 of this publication, RSAF pilots are required to undergo a DGCA-approved flight training programme to qualify for taking the flight test.
- 4.2 The following minimum flying training must be carried out in an approved flying training organisation for the following category of military pilots:
- (a) Fighter Pilots (Twin Engine Aircraft) and Military Transport Pilots – None.
 - (b) Fighter Pilots (Single-Engine Aircraft) – A minimum of 35 flying hours on twin engine aircraft.
 - (c) Helicopter Pilots – A minimum of 65 flying hours on single-engine aircraft and a minimum of 35 flying hours on twin engine aircraft.

5 INSTRUMENT RATING (AEROPLANES AND HELICOPTERS)

- 5.1 Exemption from having to undertake an approved course of training will normally be given to RSAF pilots holding a military instrument flying qualification at or above the ' Green Card' level and who are in current flying practice.

**APPENDIX A FLIGHT INSTRUCTIONS AND SKILLS REQUIREMENTS FOR
THE ISSUE OF A CPL AND ATPL**

1 FLIGHT INSTRUCTIONS

1.1 CPL (Aeroplanes)

1.1.1 The applicant for a CPL(A) shall have received dual instruction in aeroplanes from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in the following areas to the level of performance required for the commercial pilot:

- (a) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
- (b) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (c) control of the aeroplane by external visual reference;
- (d) flight at critically slow airspeeds; spin avoidance; recognition of, and recovery from, incipient and full stalls;
- (e) flight at critically high airspeeds; recognition of, and recovery from, spiral dives;
- (f) normal and cross-wind take-offs and landings;
- (g) maximum performance (short field and obstacle clearance) take-offs; short-field landings;
- (h) basic flight manoeuvres and recovery from unusual attitude by reference solely to basic flight instruments;
- (i) cross-country flying using visual reference, dead-reckoning and radio navigation aids; diversion procedures;
- (j) abnormal and emergency procedures and manoeuvres; and
- (k) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology.

1.1.2 If the privileges of the licence are to be exercised at night, the applicant shall have received dual instruction in aeroplanes in night flying, including take-offs, landings and navigation.

1.2 ATPL (Aeroplanes)

1.2.1 The applicant shall have received the dual flight instruction required for the issue of the commercial pilot licence – aeroplane and for the issue of the instrument rating – aeroplane.

1.3 CPL (Helicopters)

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

- (a) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;
- (b) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (c) control of the helicopter by external visual reference;
- (d) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
- (e) ground manoeuvring and run-ups; hovering; take-offs and landings – normal, out of wind and sloping ground; steep approaches;
- (f) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
- (g) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;
- (h) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
- (i) cross-country flying using visual reference, dead-reckoning and radio navigation aids, diversion procedures;
- (j) abnormal and emergency procedures, including simulated helicopter equipment malfunctions, auto-rotating approach and landing; and
- (k) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology.

1.3.2 If the privileges of the licence are to be exercised at night, the applicant shall have received dual instruction in helicopters in night flying, including take-offs, landings and navigation.

1.4 ATPL (Helicopters)

1.4.1 The applicant shall have received the flight instruction required for the issue of the commercial pilot licence – helicopter.

2 **SKILLS**

2.1 CPL (Aeroplanes)

2.1.1 The applicant shall have demonstrated the ability to perform as pilot-in-command of an aeroplane, the procedures and manoeuvres described in Flight Instructions - CPL(A) with a degree of competency appropriate to the privileges granted to the holder of a commercial pilot licence – aeroplane, and 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; and
- (e) maintain control of the aeroplane at all times in a manner such that the successful outcome of a procedure or manoeuvre is never seriously in doubt.

2.2 ATPL (Aeroplanes)

2.2.1 The applicant shall have demonstrated the ability to perform, as pilot-in-command of a multi-engined aeroplane 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) procedures and manoeuvres for IFR operations under normal, abnormal and emergency conditions, including simulated engine failure, and covering at least the following:
 - transition to instrument flight on take-off
 - standard instrument departures and arrivals
 - en-route IFR procedures and navigation
 - holding procedures
 - instrument approaches to specified minima
 - missed approach procedures
 - landings from instrument approaches
- (d) abnormal and emergency procedures and manoeuvres related to failures and malfunction of equipment, such as powerplant, systems and airframe; and
- (e) procedures for crew incapacitation and crew co-ordination, including allocation of pilot tasks, crew co-operation and use of checklists.

2.2.2 The applicant shall have demonstrated the ability to perform the procedures and manoeuvres described above with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot licence – aeroplane, and 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 a manner such that the successful outcome of a procedure or manoeuvre is never in doubt;
- (f) understand and apply crew co-ordination and incapacitation procedures; and
- (g) communicate effectively with the other flight crew members.

2.3 CPL (Helicopters)

2.3.1 The applicant shall have demonstrated the ability to perform as pilot-in-command of a helicopter, the procedures and manoeuvres described in Flight Instructions – CPL(H) with a degree of competency appropriate to the privileges granted to the holder of a commercial pilot licence – helicopter, and 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; and
- (e) maintain control of the helicopter at all times in a manner such that the successful outcome of a procedure or manoeuvre is never seriously in doubt.

2.4 ATPL (Helicopters)

2.4.1 The applicant shall have demonstrated the ability to perform, as pilot-in-command of a helicopter required to be operated with a co-pilot, the following procedures and manoeuvres:

- (a) pre-flight procedures, including the preparation of the operational flight plan and filing of the air traffic services flight plan;
- (b) normal flight procedures and manoeuvres during all phases of flight;
- (c) abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as powerplant, systems and airframe; and
- (d) procedures for crew incapacitation and crew co-ordination including allocation of

pilot tasks, crew co-operation and use of checklists.

2.4.2 The applicant shall have demonstrated the ability to perform the procedures and manoeuvres described above with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot licence – helicopter, and to:

- (a) operate the helicopter 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 helicopter at all times in a manner such that the successful outcome of a procedure or manoeuvre is never in doubt;
- (f) understand and apply crew co-ordination and incapacitation procedures; and
- (g) communicate effectively with the other flight crew members.

INTENTIONALLY
LEFT BLANK

APPENDIX B RECORDING AND CREDITING OF FLIGHT TIME

Case	Operating Capacity	Aircraft Rating (A) Requirements in professional pilot licence, or Aircraft group rating in PPL where applicable	Non-pilot licence requirements	Designation in log book under 'Holder's operating capacity'	Recording of item in log book and crediting of such time toward licence experience requirements
1	2	3	4	5	6
A	Pilot-in-command (PIC)	Part 1: Appropriate PPL group	N/A	PIC or P1	Enter time in 'P1' column, Counted in full.
B	Co-pilot performing the duties of PIC under supervision of pilot-in-command (PIC U/S) See Note 2	Part 1 or Part 2; Appropriate PPL group	N/A	PIC U/S	Enter time in 'P1' column. Counted in full toward licence experience requirements subject to certification by the pilot-in-command.
C	Co-pilot See Note 3	Part 2 or Part 1	N/A	P2	Enter time in 'Second Pilot' or in 'Co-pilot (P2)' column. Counted in full toward overall licence experience requirements.
D	Co-pilot whilst holding PPL	Group B or C	N/A	P2	Enter times as for Case C. Counted in full towards overall licence experience requirements for professional pilots' licences.
E	Pilot acting as (i) Systems Panel Operator (SPO) in aircraft certificated for optional operation by three pilot crew; or (ii) Flight Engineer (FE) in aircraft certificated for optional or mandatory operation by two pilots + F E crew	N/A N/A	N/A F E licence with rating	SPO E1	Enter time in the 'F Eng', 'Any other flying' or spare column and annotate 'SPO' or 'F Eng' as appropriate. Not counted towards licence experience requirements.

Case	Operating Capacity	Aircraft Rating (A) Requirements in professional pilot licence, or Aircraft group rating in PPL where applicable	Non-pilot licence requirements	Designation in log book under 'Holder's operating capacity'	Recording of item in log book and crediting of such time toward licence experience requirements
1	2	3	4	5	6
F	<p>Pilot on flight deck but not as P1, P2, SPO or F E:</p> <p>(i) Acting as 'required' Flight Navigator (under the Air Navigation (91 – General Operating Rules) Regulations 2018, Air Navigation (121 – Commercial Air Transport by Large Aeroplanes) Regulations 2018 or Air Navigation (135 – Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018);</p>	N/A	F/N licence	N1	<p>Enter time in the 'F/Nav', 'Any other flying' or spare column and annotate 'N1'.</p> <p>Not counted toward licence experience requirements</p>
	(ii) Pilot supervising Co-pilot activities;	Part 1	N/A	P2	Enter time for Case C and count in full toward overall licence experience requirements.
	(iii) Other flying duties	N/A	N/A	SNY	Enter time in 'Any other flying' or spare column and annotate 'SNY'. Not counted toward licence experience requirements.
G	Pilot under instruction for the purpose of gaining a licence or rating, or for conversion to an aircraft type within a PPL Aircraft Rating group.	N/A for grant of a licence or Aircraft Rating. Otherwise Part 1 or Part 2, or appropriate PPL Aircraft Rating group.	N/A	P/UT	<p>Enter time in 'Dual' column,</p> <p>Counted in full toward overall licence experience requirements.</p>
H	Pilot under instruction on an APPROVED COURSE of CPL, CPL/IR or MPL training acting as pilot-in-command under the supervision of a flying instructor.	N/A	N/A	PIC U/S	<p>Enter time in 'P1' column.</p> <p>Counted in full toward PIC requirements for grant of a CPL, CPL/IR or MPL subject to certification by the supervising pilot and to a maximum agreed between the DGCA and the flying training organisation conducting the Approved Course.</p>

Case	Operating Capacity	Aircraft Rating (A) Requirements in professional pilot licence, or Aircraft group rating in PPL where applicable	Non-pilot licence requirements	Designation in log book under 'Holder's operating capacity'	Recording of item in log book and crediting of such time toward licence experience requirements
1	2	3	4	5	6
J	Pilot undergoing any form of flight test other than for the grant renewal or extension of an aircraft rating Part 2.	N/A for grant of a licence or Aircraft Rating. Part 2 for upgrade of Aircraft Rating from Part 2 to Part 1. Otherwise, Part 1 or appropriate PPL Aircraft Rating group.	N/A N/A	PIC U/S for successful test P/UT for unsuccessful test	For successful test enter time in 'P1' column and have it certified by the aircraft commander. For unsuccessful tests enter time in 'Dual' column. PIC U/S time counted in full within maximum specified in Cases B and H. P/UT time counted in full toward overall licence experience requirements.
K	Pilot undergoing a flight test in the capacity of co-pilot for grant of a licence or rating or for variation of rating, or in relation to Certificate of Test.	N/A for grant of a licence or Aircraft Rating. Otherwise, Part 2.	N/A	P2	As for Case C.
L	Student pilot flying as the sole occupant of an aircraft during training for the grant of a PPL, CPL or MPL.	N/A	N/A	PIC or P1	Enter time in 'P1' column. Counted in full.
M	Student pilot flying as pilot-in-command during training for the grant of a CPL accompanied by: Safety pilot	PPL for appropriate Group or Exemption from holding a PPL. As above or Part 1	N/A N/A	PIC or P1 SNY	As for Case L. As for Case F (iii)
N	Pilot undergoing AFI training as pilot-in-command accompanied by: Pilot acting as 'student' for instructional purposes	Part 1; Appropriate PPL group Part 1; Appropriate PPL group	N/A N/A	PIC or P1 SNY	Roles in Column 2 are interchangeable between pilots. Time spent as 'P1' to be entered and counted as for Case L. Time spent as 'student' to be entered and counted as for Case F (iii).

Notes:

- Whenever two pilots performing duties in the same capacity, share a particular operating duty on a flight, each pilot shall only record (in the appropriate column of his personal log book), the time when he actually performed such duty in the pilot or co-pilots seat during the flight. The time spent away from duty in the respective seat shall be logged as SNY as per F(iii) in the foregoing table. Such time shall NOT count towards licence experience requirements, but shall apply for FDP and FTL.

2 A co-pilot performing the duties and functions of the pilot-in-command or under the supervision of the pilot-in-command, will be credited with the flight time towards licence experience requirements provided all the following conditions are met:

- (a) the flight conducted in an aircraft equipped to be operated by a co-pilot and the aircraft is operated in a multi-pilot operation;
- (b) the flight was conducted in an aircraft having a Certificate of Airworthiness which requires its flight crews to include not less than two pilots;
- (c) he was responsible for checking the accuracy of the flight plan, load sheet and fuel calculations for the flight;
- (d) he ensured that all crew checks were carried out in accordance with the laid down operation procedures;
- (e) throughout the flight he carried out all the duties and functions of pilot-in-command and conducted the take-off and the landing;
- (f) he resolved all meteorological, communication and air traffic control problems;
- (g) the pilot-in-command did not have to overrule any course of any course of action proposed or taken by the co-pilot; and
- (h) the pilot-in-command certifies in the co-pilot flying log book against the entry for that flight that it was carried out by the co-pilot acting as pilot-in-command under supervision. Such certification will be taken as confirming that all the foregoing conditions were met.

3 A pilot claiming flying hours as co-pilot towards meeting the overall flying experience requirements for a licence, as provided for in cases C, D, F (ii) or K, will only be credited with that flight time provided the aircraft is equipped to be operated by a co-pilot and the aircraft is operated in a multi-pilot operation, with the pilot holding an appropriate licence to perform co-pilot duties, and if:

- (a) the flight was conducted in an aircraft required by:
 - (i) its Certificate of Airworthiness; or
 - (ii) Air Navigation (91 – General Operating Rules) Regulations 2018; or
 - (iii) Air Navigation (98 – Special Operations) Regulations 2018; or
 - (iv) Air Navigation (121 – Commercial Air Transport by Large Aeroplanes) Regulations 2018; or
 - (v) Air Navigation (135 – Commercial Air Transport by Helicopters and Small Aeroplanes) Regulations 2018,

to carry a crew of not less than two pilots; or

- (b) the flight was conducted by an Air Operator's Certificate (AOC) holder choosing to operate a particular aircraft as a two pilot operation and provided that the specific duties that the second pilot was required to perform on all flights in respect of the operation of the aircraft were contained in the Operations Manual relating to the aircraft; or
 - (c) it was conducted in a RSAF aircraft normally flown by more than one pilot.
- 4 Flight time as PIC U/S, apart from as specifically provided for under Case J above, will only be allowable for the holder of a PPL subject to the terms of a prior agreement with the DGCA.
- 5 Any pilot conducting proficiency tests or training or supervision or supernumerary duties, from any seat other than the pilot or co-pilot seat, shall record (in the appropriate column of his logbook) such flying as SNY as per F(iii) in the foregoing table. Such time shall NOT count towards licence experience requirements, but shall apply for FDP and FTL.

APPENDIX C THE GENERAL FLIGHT TEST

SYLLABUS FOR THE TEST FOR AEROPLANES AND HELICOPTERS

PREPARATION FOR FLIGHT AND PRE TAKE-OFF PROCEDURES : AEROPLANES AND HELICOPTERS

At the beginning of the test, or at the beginning of any Section of the test when Sections are taken separately, applicants will be assessed on their ability to perform the following actions leading up to the take-off.

- Self briefing
- Attention to weather minima
- Document checking
- Preliminary and external checks
- Checks before starting
- Starting procedure (and rotor engagement – helicopters)
- Checks after starting including instrument and radio
- Taxiing and instrument checks
- Power check
- Pre take-off checks
- ATC liaison and compliance

GFT SECTION 1 : CROSS-COUNTRY

Aeroplanes and Helicopters

- Flight planning and self-briefing
- DR Navigation (correction of track error, revision of ETAs)
- Map reading
- Use of radio aids for position fixing
- Maintenance of heading/height/airspeed. Heading setting technique
- Diversion
- Approach to unfamiliar landing point (helicopters only)
- Log keeping
- ATC liaison and compliance. Observance of Air Traffic Control Regulations and Rules of the Air
- Engine handling
- Cockpit management
- Airmanship

Note : At some suitable stage in Section 1, the applicant will be asked to carry out certain basic handling exercises from Section 2 and the instrument flying exercises from Section 3. Part of the navigation element will be conducted under simulated IMC.

GFT SECTION 2 : BASIC AIRCRAFT HANDING

Aeroplanes

Take-offs (including crosswind)
Steep turns
Precautions before stalling

Recovery from stall in straight flight
Recovery from stall in approach configuration
Recovery from stall in banked attitude
Steep gliding turns
Action in event of fire
Forced landings
Circuit procedure
Approaches and landings (including crosswind)
Go-around procedure
Engine failures after take-off
Shutdown procedures
ATC liaison and compliance
Engine handling

Helicopters

Vertical take-off and landing
Transition into forward flight/hover
Climbing, descending and steep turns
Engine failure and practice forced landing
An auto-rotating landing on a predetermined position
Action on the event of fire
Engine failure in hover flight
Crosswind/sloping ground landings and take-offs
Sideways and backward flight : hover turns
Partial power take-off and landing
Manual approach and landing (if helicopter servo-controlled)
Flight into and out of a restricted area
Emergency stop
Vortex ring recognition and recovery
Shut down procedures
Engine handling
ATC liaison and compliance
Airmanship

GFT SECTION 3 : INSTRUMENT FLYING

Aeroplanes

Full panel
Straight and level
Turns at given rates
Turns onto given headings

Climbing and descending turns
Limited panel
Straight and level
Turns onto given headings
Recovery from unusual attitudes

Helicopters

Full panel
Straight and level with power and speed changes
Turns at given rates
Turns onto given headings
Climbing and descending turns
Recovery from unusual attitudes
Limited panel
Straight and level
Turns onto given headings
Auto-rotation
Entry, including heading and RPM control
Descent at optimum IAS
Turn into last known wind direction
Recovery to powered flight
Instrument approach procedures
Recovery to base (suitable let-down)

FLIGHT TEST TOLERANCES (AEROPLANES)

The following limits are for general guidance. The CAAS Inspector or Authorised Flight Examiner shall make allowance for turbulent conditions and the handling qualities and performance of the aeroplane used.

Height

Normal flight ± 50 feet
with simulated engine failure ± 100 feet

Tracking on radio aids $\pm 5^\circ$

Heading

Normal flight $\pm 10^\circ$
with simulated engine failure $\pm 15^\circ$

Speed

Take-off and approach $+5$ knots/ -0 knots
All other flight regimes

FLIGHT TEST TOLERANCES (HELICOPTERS)

The following limits are for general guidance. The CAAS Inspector or Authorised Flight Examiner shall make allowance for turbulent conditions and the handling qualities and performance of the Helicopters used.

Height

Normal flight ± 50 feet
with simulated engine failure ± 100 feet

Tracking on radio aids $\pm 5^\circ$

Heading

Normal flight $\pm 10^\circ$
with simulated engine failure $\pm 15^\circ$

Speed

Take-off and approach + 5 knots/-0 knots
All other flight regimes ± 10 knots
Ground drift
T.O hover I.G.E ± 3 feet
Landing ± 2 feet (with 0 feet rearward or lateral flight)

APPENDIX D INSTRUMENT RATING FLIGHT TEST SYLLABUS AND FLIGHT TEST CONDITIONS

1 FLIGHT TEST SYLLABUS

1.1 Section 1: Departure Procedure

All pre-departure checks and drills necessary to check and prepare the aircraft and its equipment for the safe conduct of the flight. A visual take-off followed by an instrument climb-out and departure, following the routings published for the aerodrome, unless ATC otherwise directs.

1.2 Section 2: Airways Procedure

Entry into, flight within and departure from airways in accordance with ATC clearance, using tracking facilities as briefed by the CAAS Inspector or Authorised Flight Examiner.

1.3 Section 3: ILS Instrument Approach Procedure

An approach to land procedure, as published in the relevant AIP for the facility in use, descending to a specified Decision Height and position from which a direct landing may be made. Both localiser and glide path must be used.

1.4 Section 4: NDB, VOR or RNAV Instrument Approach Procedure

This is an approach to land procedure requiring descent to minimum descent altitude/height (MDA/H). The candidate should follow the published procedure for the facility in use. Following descent to MDA/H, altitude/height should be maintained along the final approved track to a point where either:

- (a) a landing may be safely made; or
- (b) the Missed Approach Point is reached.

In the case of (b) the published Missed Approach Procedure should be carried out. On approaches to land where timing is used to estimate the Missed Approach Point from overhead the final approach fix a candidate may be asked, at some stage on the final approach, to estimate the time or distance to the runway threshold.

Note: At the conclusion of Section 3:

- (a) On reaching Decision Height, the missed approach action to establish a normal climb shall be initiated by the applicant unless otherwise directed.
- (b) The missed approach procedure as published is to be flown unless otherwise as directed, during which the CAAS Inspector or Authorised Flight Examiner will also simulate failure of an engine (multi-engine aeroplanes only).
- (c) A safe flight path is to be established with simulated engine failure, followed by identification of failed engine and completion of essential actions. For multi-engine aeroplanes, feathering will be simulated by the CAAS Inspector or the Authorised Flight

Examiner at an appropriate stage.

- (d) A climbing flight path is to be established at the recommended speed, following the published missed approach procedure or as directed by ATC, to a position from which the next instrument approach procedure may commence (Section 4 will be carried out with a simulated engine failure in the case of a multi-engine aeroplane.)

1.5 Sub-Sections

- 1.5.1 A series of 4 sub-sections are defined to identify procedures or manoeuvres within main sections that need to be carried out in particular circumstances.

1.5.2 *Sub-Station A: Preliminary and External Checks*

The checks specified in paragraph 1.1 up to and including starting engines.

1.5.3 *Sub-Section B: Holding Procedure*

Standard entry into a holding pattern and completion of at least one pattern of the appropriate holding procedure, including any necessary adjustments to leave the holding pattern at the Onwards Clearance Time or Expected Approach Time, if one has been specified by ATC.

1.5.4 *Sub-Section C: Engine Failure Procedures (multi-engine aircraft only)*

Identification of failed engine and simulated failure procedures. Basic handling and instrument flying following simulated engine failure.

1.5.5 *Sub-Section D: Limited Panel*

Basic handling to cover straight and level flight, turns onto specified headings and recovery from unusual attitudes.

2 TEST CONDITIONS

- 2.1 Decision Heights and Minimum Descent Heights (or altitudes) must be calculated by the applicant, and agreed by the CAAS Inspector or Authorised Flight Examiner.
- 2.2 During the test the applicant will be expected to carry out all the duties appropriate to a sole flight crew member or, in the case of a test for a multi-crew rating, the handling pilot.
- 2.3 In the case of a multi-crew rating, the applicant may take the test in either the PIC's or co-pilot seat, and will be expected to call upon the other flight crew members to help in accordance with the normal crew drills for that type of aeroplane.
- 2.4 Where the CAAS Inspector or Authorised Flight Examiner occupies the PIC's or co-pilot seat, he will be designated as PIC. Where he does not occupy either of these positions, the pilot occupying either one of the seats who is not undergoing the test will be designated as PIC who must be authorised by the operator of the aeroplane to act as a training or check captain on type.

- 2.5 The applicant must indicate to the CAAS Inspector or Authorised Flight Examiner the checks and duties which he is performing, including identification of radio facilities. Checks must be in accordance with the authorised checklist for the aircraft, on which the test is being taken. Power settings and speeds should be agreed with the CAAS Inspector or Authorised Flight Examiner before the start of the flight, and will normally be those given in the operations or flight manual for the aircraft type in question.
- 2.6 The applicant, with the remainder of the crew in the case of a test on a multi-crew aeroplane, will be briefed by the CAAS Inspector or Authorised Flight Examiner before the test. The applicant will be responsible for ensuring that all equipment and documentation necessary for the planning and execution of the flight is available.
- 2.7 The CAAS Inspector or Authorised Flight Examiner will choose the route for the test. It may start and finish at the same aerodrome or may end at another aerodrome. Applicants cannot decline to fly the nominated route solely because they are unfamiliar with it.
- 2.8 The CAAS Inspector or Authorised Flight Examiner may be called upon by an applicant to check for the presence of airframe icing but will otherwise take no part in the operation of the aircraft except where he considers it necessary to intervene in the interests of safety or to avoid unacceptable delay to other air traffic.
- 2.9 The test will be assessed assuming that it is the first flight of the day, that the aircraft has been parked outside overnight in freezing conditions, that cloud is entered after take-off at 150 ft above aerodrome level, and that light icing conditions and cloud are forecast at all levels through which the test is conducted.

3 FLIGHT TEST TOLERANCE

The limits given below are for general guidance. Allowance will be made for turbulent conditions and for the handling qualities and performance of the aircraft used.

<u>Height</u>	NORMAL FLIGHT	FLIGHT WITH SIMULATED ASYMMETRIC FLIGHT POWER
(a) In level flight (other than at Decision Height)	+/-100 ft	+/-100 ft
(b) For starting go-around at Decision Height	+50 ft / 0 ft	+50 ft / 0 ft
(c) Minimum Descent Height/ MAP/altitude	+100 ft / 0 ft	+100 ft / 0 ft
Tracking on Radio Navigation Aids		
Tracking on Radio Navigation Aids	+/-5 deg	+/-5 deg
ILS Approach	half-scale deflection on Localiser and Glidepath	half-scale deflection on Localiser and Glidepath
Heading	+/-5 deg	+/-10 deg
Speed	+/-5 kts (Aeroplanes)	+10/-5 kts (Aeroplanes)
	+/-10 kts (Helicopters)	+/-10 kts (Helicopters)

GFT SECTION 2 : BASIC AIRCRAFT HANDING

Aeroplanes

Take-offs (including crosswind)

Steep turns

Precautions before stalling

Recovery from stall in straight flight

Recovery from stall in approach configuration

Recovery from stall in banked attitude

Steep gliding turns

Action in event of fire

Forced landings

Circuit procedure
Approaches and landings (including crosswind)
Go-around procedure
Engine failures after take-off
Shutdown procedures
ATC liaison and compliance
Engine handling

Helicopters

Vertical take-off and landing
Transition into forward flight/hover
Climbing, descending and steep turns
Engine failure and practice forced landing
An auto-rotating landing on a predetermined position
Action on the event of fire
Engine failure in hover flight
Crosswind/sloping ground landings and take-offs
Sideways and backward flight : hover turns
Partial power take-off and landing
Manual approach and landing (if helicopter servo-controlled)
Flight into and out of a restricted area
Emergency stop
Vortex ring recognition and recovery
Shut down procedures
Engine handling
ATC liaison and compliance
Airmanship

GFT SECTION 3 : INSTRUMENT FLYING

Aeroplanes

Full panel
Straight and level
Turns at given rates
Turns onto given headings
Climbing and descending turns
Limited panel
Straight and level
Turns onto given headings
Recovery from unusual attitudes

Helicopters

Full panel
Straight and level with power and speed changes
Turns at given rates
All other flight regimes

FLIGHT TEST TOLERANCES (HELICOPTERS)

The following limits are for general guidance. The CAAS Inspector or Authorised Flight Examiner shall make allowance for turbulent conditions and the handling qualities and performance of the Helicopters used.

Height

Normal flight ± 50 feet
with simulated engine failure ± 100 feet

Tracking on radio aids $\pm 5^\circ$

Heading

Normal flight $\pm 10^\circ$
with simulated engine failure $\pm 15^\circ$

Speed

Take-off and approach + 5 knots/-0 knots
All other flight regimes ± 10 knots
Ground drift
T.O hover I.G.E ± 3 feet
Landing ± 2 feet (with 0 feet rearward or lateral flight)

APPENDIX E FINAL ASSESSMENT FLIGHT TEST FOR MPL(A)

1 GENERAL

- 1.1 An applicant for the final assessment flight test shall apply using forms prescribed by the DGCA. The applicant shall have received instruction on the same type of aircraft to be used in the test.
- 1.2 The fees for the flight tests are prescribed in the Twelfth Schedule of the ANO.

2 CONDUCT OF THE FINAL ASSESSMENT FLIGHT TEST

- 2.1 The test shall be conducted by a CAAS Inspector or an Authorised Flight Examiner.
- 2.2 The CAAS Inspector or Authorised Flight Examiner may choose between different scenarios containing simulated relevant operations.
- 2.3 Should the applicant choose to terminate a final assessment flight test for reasons considered inadequate by the CAAS Inspector or Authorised Flight Examiner, the applicant shall retake the entire assessment. If the test is terminated for reasons considered adequate by the CAAS Inspector or Authorised Flight Examiner, only those sections not completed shall be tested in a further flight.
- 2.4 At the discretion of the CAAS Inspector or Authorised Flight Examiner, any manoeuvre or procedure of the test may be repeated once by the applicant. The CAAS Inspector or Authorised Flight 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.
- 2.5 The applicant shall be required to fly the aeroplane from a position where the co-pilot functions can be performed.
- 2.6 During pre-flight preparation for the test the applicant is required to determine power settings and speeds. The applicant shall indicate to the CAAS Inspector or Authorised Flight 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 aeroplane on which the test is being taken and 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 aeroplane used. Decision heights/altitude, minimum descent heights/altitudes and missed approach point shall be agreed upon with the CAAS Inspector or Authorised Flight Examiner.
- 2.7 The CAAS Inspector or Authorised Flight Examiner shall take no part in the operation of the aeroplane.
- 2.8 The final assessment for a multi-pilot aeroplane shall be performed in a multi-crew environment. Another applicant or another type rated qualified pilot may function as the second pilot.

- 2.9 The applicant shall operate as Pilot Flying (PF) during all sections of the final assessment, except for abnormal and emergency procedures, which may be conducted as PF or Pilot Monitoring (PM), in accordance with MCC.
- 2.10 The test/check should be accomplished under IFR, and as far as possible be accomplished in a simulated commercial air transport environment. An essential element to be checked is the ability to plan and conduct the flight from routine briefing material.

3 PASS STANDARDS

- 3.1 The applicant shall pass all items of the final assessment flight test within 21 days from the date of the first attempt. Failure of more than 5 items will require the applicant to take the entire assessment again. An applicant who fails 5 or less items shall take the failed items again. Failure in any item on the re-assessment including those items that have been passed at a previous attempt will require the applicant to take the entire assessment again.
- 3.2 Failure to achieve a pass in all items in the test with three attempts will require the applicant to undergo further training.

4 FLIGHT TEST TOLERANCE

- 4.1 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; and
 - (g) communicate effectively with the other crew members.

4.2 The following limits given below are for general guidance. Allowance shall be made for turbulent conditions and the handling qualities and performance of the aeroplane used:

<u>Height</u>	NORMAL FLIGHT	FLIGHT WITH SIMULATED ASYMMETRIC FLIGHT POWER
(a) In level flight (other than at Decision Height)	+/-100 ft	+/-100 ft
(b) For starting go-around at Decision Height	+50 ft / 0 ft	+50 ft / 0 ft
(c) Minimum Descent Height/ MAP/altitude	+100 ft / 0 ft	+100 ft / 0 ft
Tracking on Radio Navigation Aids	+/-5 deg	+/-5 deg
Precision Approach	half-scale deflection on Localiser and Glidepath	half-scale deflection on Localiser and Glidepath
Heading	+/-5 deg	+/-10 deg
Speed	+/-5 kts (Aeroplanes) +/-10 kts (Helicopters)	+10/-5 kts (Aeroplanes) +/-10 kts (Helicopters)

INTENTIONALLY
LEFT BLANK