

Part I : Applicant's Information			
Name of Organisation:		ATO certificate no.: <i>FTO-XXXX or ATCO-XXXX or MTO-XXXX</i>	
Title of proposed Training Program: CPL(A) INTEGRATED COURSE		☐ Including ME Training Date of Submitted: <i>DD - MMM - YY</i> Proposed Course Start Date: <i>DD - MMM - YY</i>	Application No.: <i>(For CAAT)</i>
Type of Submission ☐ Initial ☐ Amendment	No. of Attempt ☐ 1 st attempt ☐ 2 nd attempt ☐ 3 rd attempt	How the training is to be delivered ☐ Classroom Delivery ☐ Virtual Classroom ☐ Flight Training ☐ Simulator Training ☐ Other (specify).....	Training device will be used for this course ☐ Simulator (FSTD/STD) ☐ Actual aircraft..... <i>Aircraft Type/Class</i>
Coordinator Name/ contact: <i>Mr./Ms. XXX YYYY/ email</i>			
The following documents are submitted with this application by applicant: ☐ 1. Intention letter on the applicant's company letterhead specifying the title of the training programme ☐ 2. Checklist for Training Manual Approval ☐ 3. Draft Manual ☐ 4. Reference of training material/Other relevant documents or required by competent official.....			
Please ensure that • There is a list of effective pages. Every page is identified with a page number, a date and a revision number . • Training materials and Examination Tests, in any format, shall be made accessible for CAAT inspector • Reference in the applicable Training Program should be detail appropriate with training materials • Organisation declaration and signature in the first page must be signed			
Declaration and Signature the information provided in this form is complete and correct and that the documents provided are genuine. Signature: _____ Applicant's Name: _____ Date: _____			

Part II : Competent Official Use Only

Check Submitted document			
1 st checked ☐ Complete date..... ☐ Incomplete date..... Signature/Name:	2 nd checked ☐ Complete date..... ☐ Incomplete date..... Signature/Name:	3 rd checked ☐ Complete date..... ☐ Incomplete date..... Signature/Name:	Financial (If applicable) ☐ Invoice No..... Date:..... ☐ Receipt No..... Date:.....
Verification result: ☐ Accept ☐ Reject			
This compliance check form has been verified by:			
Signature:		Name:	
Date:			
(If applicable) Under supervision of:			
Signature:		Name:	
Date:			
Instructions: 1) ATO is to conduct a self-assessment as part of its compliance check by providing manual references into the ‘Compliance checked by ATO’. 2) Failure to complete this form may result in a delay in approval processing. After 3rd rejected, applicant shall start the new process from the beginning with the new intention letter. 3) Each check list item shall be assessed and given a result either ‘Satisfactory - (S)’, ‘Unsatisfactory - (U)’ or ‘Not applicable - N/A’ a. ‘Satisfactory’ or ‘S’ refers to satisfactory level. It shall be given if the applicant is able to provide or demonstrate adequate of CAAT regulatory compliant evidence, reliable records of implementation and demonstrate a sound knowledge if interview of relevant personnel are performed. Also, all sub-items must be satisfied. b. ‘Unsatisfactory’ or ‘U’ refers to unsatisfactory level. It shall be given if any actions found not to be in compliance with CAAT rules and regulations or not to be conformed to any applicant ’s documentation as well as any actions being done without evidence of records. c. ‘N/A’ shall be given when information in a certain table cell is not provided, because it does not apply to a particular case in question. 4) Remarks column, inspection result information shall be recorded, both satisfactory or unsatisfactory, the information shall be detailed enough to support the inspection result. 5) Signature block: the following shall be filled. a. Name & surname, in capital letters b. Signature c. Signed date in DD Month (e.g. JAN) and year (in C.E.) 6) Provide detail in each subtopic/content of every subjects. 7) Checklist does not address Training Manual requirements as per TCAR PEL Part ORA. Applicant shall provide separate Training Manual checklist for review and approval along with this checklist. 8) The Theoretical Knowledge Checklist shall be submitted along with this checklist for both initial approvals and amendments affecting theoretical knowledge training			

Note: All fields/items shall be completed. In fields/items for which there is no answer or is not used, mark a horizontal straight line or enter “N/A” or shaded with a reason.

Part III : Training Devices (FSTD) and Long Briefing

List of FSTDs used for the course.							
No.	Training Device(s)	Type	FSTD Qualification	Sim Certificate No.	Primary reference document	Serial Number	Expiry Date

Long Briefing			
No.	Subject	Duration	Reference of Documentation

Part IV : Regulatory Requirements

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
General Requirement										
1	Pre-entry requirement	Applicants for the SPL shall be at least 17 years of age	TCAR PEL PART FCL FCL.080							
		When ensuring that the applicant complies with the prerequisites for the course, in accordance with ORA.ATO.145, the ATO should check that the applicant has enough knowledge of mathematics, physics and English to facilitate the understanding of the theoretical knowledge instruction content of the course.	AMC1 to Appendix 3							
2	SPL Privileges and Conditions	(a) The privileges of the holder of an SPL are to participate to Flying training with an instructor or to fly solo under the supervision of an instructor or to fly as authorised by an examiner for the purpose of a skill test. These privileges are restricted to the airspace of the kingdom of Thailand.	TCAR PEL PART FCL FCL.085							
		(b) A student pilot shall not fly solo unless authorised to do so and supervised by a flight instructor.								
		(c) Before his/her first solo flight, a student pilot shall hold a valid license, at least a Student pilot license when no other license is held.								
		The exercise of the privileges granted by a licence shall be dependent upon the validity of the ratings contained therein, if applicable, and of the medical certificate as appropriate to the privileges exercised.	TCAR PEL PART FCL FCL.040							
3	Conditions for CPL Issuance	An applicant for a CPL shall be at least 18 years of age.	TCAR PEL PART FCL FCL.300, FCL.305							
		An applicant for the issue of a CPL shall have fulfilled the requirements for the class or type rating of the aircraft used in the skill test.								
4	CPL Privileges	The privileges of the holder of a CPL (Aeroplane, Helicopters, Airship, and Power-lift) are, within the appropriate aircraft category, to: (1) exercise all the privileges of the holder of an LAPL and a PPL; (2) act as PIC or co-pilot of any aircraft engaged in operations other than commercial air transport; (3) act as PIC in commercial air transport of any single-pilot aircraft subject to the restrictions specified in FCL.060 and in this Subpart;	TCAR PEL PART FCL FCL.305							

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		(4) act as co-pilot in commercial air transport subject to the restrictions specified in FCL.060.								
5	Theoretical and Flight Instruction Requirements	An applicant for a CPL shall have completed theoretical knowledge instruction and flight instruction at an ATO, in accordance with Appendix 3 to this regulation.	TCAR PEL PART FCL FCL.315 APPENDIX3, D.							
6	CPL Skill Test Requirement	An applicant for a CPL shall pass a skill test in accordance with Appendix 4 to this regulation to demonstrate the ability to perform, as PIC of the appropriate aircraft category, the relevant procedures and maneuvers with the competency appropriate to the privileges granted.	TCAR PEL PART FCL FCL.320							
7	Upset Prevention and Recovery Training (UPRT)	Theoretical knowledge and flight instruction for the issue of a CPL(A) shall include upset prevention and recovery training .	TCAR PEL PART FCL FCL.315.A							
8	Theoretical Knowledge Bridge Instruction for CPL Holders in Another Category	An applicant for a CPL holding a CPL in another category of aircraft shall have received theoretical knowledge bridge instruction on an approved course according to the differences identified between the CPL syllabi for different aircraft categories.	APPENDIX 1 - Crediting of theoretical knowledge							
9	Theoretical Knowledge Examination Requirements	(For applicants who holding a CPL in another category of aircraft) the applicant shall pass theoretical knowledge examinations as defined in this Part for the following subjects in the appropriate aircraft category: - 021 Aircraft General Knowledge: Airframe and Systems, Electrics, Powerplant, Emergency Equipment, - 022 Aircraft General Knowledge: Instrumentation, - 032/034 Performance Aeroplanes or Helicopters, as applicable, - 070 Operational Procedures, and - 080 Principles of Flight.	APPENDIX 1 - Crediting of theoretical knowledge							
10	Theoretical Knowledge Credit for CPL Applicants with IR	An applicant for a CPL having passed the relevant theoretical examinations for an IR in the same category of aircraft is credited towards the theoretical knowledge requirements in the following subjects: - Human Performance, - Meteorology.	APPENDIX 1 - Crediting of theoretical knowledge							

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11	Aim of CPL(A) Integrated Course	The aim of the CPL(A) integrated course is to train pilots to the level of proficiency necessary for the issue of a CPL(A).	TCAR PEL PART FCL APPENDIX 3, D., 1.							
12	Continuous Training Requirement for CPL(A) Integrated Course	An applicant wishing to undertake a CPL(A) integrated course shall complete all the instructional stages in one continuous course of training as arranged by an ATO.	TCAR PEL PART FCL APPENDIX 3, D., 2.							
13		The CPL integrated course should last between 9 and 24 months. This period may be extended where additional flying training or ground instruction is provided by the ATO.	AMC1 to APPENDIX3, D., (a)							
14	Admission and Crediting Criteria for CPL(A) Integrated Course	An applicant may be admitted to training either as an ab-initio entrant, or as a holder of a PPL(A) or PPL(H) issued in accordance with Annex 1 to the Chicago Convention. In the case of a PPL(A) or PPL(H) entrant, 50% of the hours flown prior to the course shall be credited, up to a maximum of 40 hours flying experience, or 45 hours if an aeroplane night rating has been obtained, of which up to 20 hours may count towards the requirement for dual instruction flight time.	TCAR PEL PART FCL APPENDIX 3, D., 3.							
15		Credit for the hours flown should be entered into the applicant's training record. In the case of a student pilot who does not hold a pilot licence and with the approval of the CAAT, an ATO may designate certain dual exercises to be flown in a helicopter or a TMG up to a maximum of 20 hours.	AMC1 to APPENDIX3, D., (b)							
16	Components of CPL(A) Integrated Course	The course shall comprise: (a) theoretical knowledge instruction to CPL(A) knowledge level; and (b) visual and instrument flying training.	TCAR PEL PART FCL APPENDIX 3, D., 4.							
17	Remedial Options for CPL(A) Applicants	An applicant failing or unable to complete the entire CPL(A) course may apply to the CAAT for the theoretical knowledge examination and skill test for a licence with lower privileges, if the applicable requirements are met.	TCAR PEL PART FCL APPENDIX 3, D., 5.							
18	Training Hours Definition	Whenever reference is made to a certain amount of hours of training, this means a full hour. Time not directly assigned to training (such as breaks, etc.) is not to be counted towards the total amount of time that is required.	AMC1 to Appendix 3							
Theoretical Knowledge and Flight Training for CPL(A)										

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19	Duration of CPL(A) Theoretical Knowledge Course -Minimum Instruction Hours -Breakdown of Instruction Hours	A CPL(A) theoretical knowledge course shall comprise at least 350 hours of instruction.	TCAR PEL PART FCL APPENDIX 3, D., 6.							
		The 350 hours of instruction should be divided in such a way that in each subject the minimum hours are:	For reference, the theoretical knowledge training hours could be referred to CPL(H) integrated course in AMC1 to APPENDIX3, J., THEORETICAL KNOWLEDGE							
		(1) Air law 15 hours								
		(2) Aircraft general knowledge 40 hours								
		(3) Flight performance and planning 35hours								
		(4) Human performance and limitations 10 hours								
		(5) Meteorology 30 hours								
		(6) Navigation 35 hours								
		(7) Operational procedures 10 hours								
		(8) Principles of flight 30 hours								
		(9) Communications 10 hours								
		* Other subdivision of hours may be agreed upon between the CAAT and the ATO								
20	Knowledge Demonstration for CPL(A) Applicants	An applicant shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of a CPL(A).	TCAR PEL PART FCL APPENDIX 3, D., 7.							
21	Minimum Total Hours (Flight Training)	The flying training, not including type rating training, shall comprise a total of at least 150 hours, to include all progress tests, of which up to 5 hours for the entire course may be instrument ground time. Within the total of 150 hours, applicants shall complete at least:	TCAR PEL PART FCL APPENDIX 3, D., 8.							
22	Dual Instruction Hours	80 hours of dual instruction, of which up to 5 hours may be instrument ground time;								
23	PIC/SPIC Requirement	70 hours as PIC, of which up to 55 hours may be as SPIC; (*SPIC experience may count towards PIC once the regulations outlined in TCAR PEL Part FCL and relevant regulations regarding SPIC are published and become effective)								

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24	Cross-Country Flight Requirements	20 hours of cross-country flight as PIC, including a VFR cross-country flight of at least 540 km (300 NM), in the course of which full stop landings at two aerodromes different from the aerodrome of departure shall be made;								
25	Night Flight Requirements	5 hours flight time shall be completed at night, comprising 3 hours of dual instruction, which shall include at least 1 hour of cross-country navigation and 5 solo take-offs and 5 solo full stop landings;								
26	Instrument Flight Instruction Requirements	10 hours of instrument flight instruction, of which up to 5 hours may be instrument ground time in an FNPT I, FTD 2, FNPT II or FFS. An applicant holding a course completion certificate for the Basic Instrument Flight Module shall be credited with up to 10 hours towards the required instrument instruction time. Hours done in a BITD shall not be credited;								
27	Complex Aircraft Training Requirement	5 hours to be carried out in an aeroplane certificated for the carriage of at least four persons that has a variable pitch propeller or a single lever power control, and retractable landing gear.								
	The flying instruction is divided into four phases (Other subdivision of phases and exercises may be agreed upon between the CAAT and the ATO)									
28	Flight Training - Phase 1 Exercises	Exercises up to the first solo flight comprise a total of at least 10 hours dual flight instruction on an SE aeroplane, including:	AMC1 to APPENDIX3, D., (d), (1)							
		(i) pre-flight operations, mass and balance determination, aeroplane inspection and servicing;								
		(ii) aerodrome and traffic pattern operations, collision avoidance and precautions;								
		(iii) control of the aeroplane by external visual references;								
		(iv) normal take-offs and landings;								
		(v) the basic UPRT exercises as specified in point (b) of AMC2 to Appendix 3; AMC1 to Appendix 5;								
		(vi) simulated engine failure.								

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29	Flight Training - Phase 2 Exercises	Exercises up to the first solo cross-country flight comprise a total of at least 10 hours of dual flight instruction and at least 10 hours solo flight including	AMC1 to APPENDIX3, D., (d), (2)							
		(i) maximum performance (short field and obstacle clearance) take-offs and short-field landings;								
		(ii) flight by reference solely to instruments, including the completion of a 180 ° turn;								
		(iii) dual cross-country flying using external visual references, DR and radio navigation aids, diversion procedures;								
		(iv) aerodrome and traffic pattern operations at different aerodromes;								
		(v) crosswind take-offs and landings;								
		(vi) abnormal and emergency procedures and maneuvers, including simulated aeroplane equipment malfunctions;								
		(vii) operations to, from and transiting controlled aerodromes, compliance with ATS procedures, R/T procedures and phraseology;								
		(viii) knowledge of meteorological briefing arrangements, evaluation of weather conditions for flight and use of AIS.								
30	Flight Training - Phase 3 Exercises	Exercises up to the VFR navigation progress test comprise a total of at least 30 hours instruction and at least 58 hours as PIC, including:	AMC1 to APPENDIX3, D., (d), (3)							
		(i) at least 10 hours instrument time, which may contain 5 hours of instrument ground time in an FNPT or an FFS and should be conducted by an FI or an authorised SFI;								
		(ii) repetition of exercises of phases 1 and 2, which should include at least 5 hours in an aeroplane certificated for the carriage of at least four persons and have a variable pitch propeller or a single lever power control and retractable landing gear;								
		(iii) night flight time including, after completion of instrument training that is equivalent to the basic instrument flight module set out in AMC2 to Appendix 6, take-offs and landings as PIC.								
31	Flight Training - Phase 4 Exercises	The dual instruction and testing up to the CPL(A) skill test contain the following:	AMC1 to APPENDIX3, D., (d), (4)							
		(i) up to 30 hours instruction which may be allocated to specialised aerial work training;								
		(ii) repetition of exercises in Phase 3, as required;								

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		(iii) in-flight maneuvers and particular flight characteristics including the basic UPRT exercises as specified in point (b) of AMC2 to Appendix 3; AMC1 to Appendix 5;										
		(iv) ME training.										
		If required, operation of an ME aeroplane including operation of the aeroplane with one engine simulated inoperative, and engine shutdown and restart (the latter exercise at a safe altitude unless carried out in an FSTD).										
32	Additional Skill Required for CPL(A)	Additional Items required for skill test		TCAR PEL PART FCL APPENDIX 4 - Skill test for the issue of a CPL, B.								
		Performance considerations and trim										
		Altimeter settings										
Upset Prevention and Recovery Training												
33	Upset Prevention and Recovery Training	The UPRT elements and components specified in AMC2 to Appendix 3; AMC1 to Appendix 5 point (a) should be integrated into the flying training phases or modules.		AMC1 to Appendix 3 (c)								
34	Basic UPRT elements and components	A. Aerodynamics	Pre-flight briefing	Flying training	AMC2 to APPENDIX3, Table 1: Basic UPRT elements and components							
		A.1 General aerodynamic characteristics	•	•								
		A.2 Aeroplane certification and limitations	•	•								
		A.4 Aerodynamics (high and low altitude)	•									
		A.5 Aeroplane performance (high and low altitude)	•									
		A.6 AoA and stall awareness	•	•								
		A.7 Aeroplane stability	•	•								
		A.8 Control surface fundamentals	•	•								
		A.9 Use of trim	•	•								
		A.10 Icing and contamination effects	•	•								
		A.11 Propeller slipstream (as applicable)	•	•								
		B. Causes of and contributing factors to upsets	Pre-flight briefing	Flying training								
		B.1 Environmental	•									
		B.2 Pilot-induced	•									
		B.3 Mechanical (aeroplane systems)	•									

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	Subject	Description	Reference	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		C. Safety review of accidents and incidents relating to aeroplane upsets	Pre-flight briefing	Flying training							
		C.1 Safety review of accidents and incidents relating to aeroplane upsets	•								
		D. G-load awareness and management	Pre-flight briefing	Flying training							
		D.1 Positive/negative/increasing/decreasing G-loads	•	•							
		D.2 Lateral G awareness (sideslip)	•	•							
		D.3 G-load management	•	•							
		E. Energy management	Pre-flight briefing	Flying training							
		E.1 Kinetic energy vs potential energy vs chemical energy (power)	•	•							
		F. Flight path management	Pre-flight briefing	Flying training							
		F.1 Relationship between pitch, power and performance	•	•							
		F.2 Performance and effects of differing power plants	•	•							
		F.3 Manual and automation inputs for guidance and control (if applicable)	•	•							
		F.4 Class-specific characteristics of flight path management	•	•							
		F.5 Management of go-arounds from various stages during the approach	•	•							
		F.6 Automation management (if applicable)	•	•							
		F.7 Proper use of rudder	•	•							
		G. Recognition	Pre-flight briefing	Flying training							
		G.1 Class-specific examples of physiological, visual and instrument clues during developing and developed upset	•	•							

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		G.2 Pitch/power/roll/yaw	•	•								
		G.3 Effective scanning (effective monitoring)	•	•								
		G.4 Stall protection systems and cues	•	•								
		G.5 Criteria for identifying stalls and upsets	•	•								
		H. System malfunction (including immediate handling and subsequent operational considerations, as applicable)	Pre-flight briefing	Flying training								
		H.1 Flight control defects	•	•								
		H.2 Engine failure (partial or full)	•	•								
		H.3 Instrument failures	•	•								
		H.4 Loss of reliable airspeed (training elements as per point (1b) of AMC2 ORA.ATO.125).	•	•								
		H.5 Automation failures	•	•								
		H.6 Stall protection system failures, including icing alerting systems	•	•								
35	Maneuver-based basic UPRT exercises	A. Timely and appropriate intervention	Pre-flight briefing	Flying training	AMC2 to APPENDIX3, Table 2: Maneuver-based basic UPRT exercises							
		A.1 Arresting divergence of the aeroplane from intended flight path	•	•								
		A.2 Preventing flight at airspeeds inappropriate for the (intended flight) condition	•	•								
		A.3 Avoiding spins	•	•								
		B. Flight path management	Pre-flight briefing	Flying training								
		B.1 Steep turns	•	•								
		B.2 Slow flight (including flight at critically low airspeed)	•	•								
		B.3 High airspeed (including flight at relatively high airspeed)	•	•								
		C. Application of OEM recommendations (if applicable) during developing upsets	Pre-flight briefing	Flying training								
		C.1 Nose-high attitudes at various bank angles	•	•								

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		C.2 Nose-low attitudes at various bank angles (including spiral dive)	•	•								
		D. Stall events in the following configurations	Pre-flight briefing	Flying training								
		D.1 Take-off configuration	•	•								
		D.2 Clean configuration	•	•								
		D.3 Landing configuration	•	•								
36	Core elements and components of TEM, pilot competencies and human factors	A. TEM	Pre-flight briefing	Flying training	AMC2 to APPENDIX3, Table 3: Core elements and components of TEM, pilot competencies and human factors							
		A.1 TEM framework	•	•								
		A.2 Recognition of threats and errors	•	•								
		A.3 Management of threats and errors	•	•								
		A.4 Countermeasures against threats and errors to prevent undesired aircraft states, including early intervention and, when necessary to prevent upsets, timely application of countermeasures to manage undesired aircraft states	•	•								
		B. Pilot Competencies, including CRM	Pre-flight briefing	Flying training								
		B.1 All elements listed in Table 1 of GM2 FCL.735.A	•	•								
		C. Human factors	Pre-flight briefing	Flying training								
		C.1 Instrument interpretation, active monitoring, checking	•	•								
		C.2 Distraction, inattention, fixation, fatigue	•	•								
		C.3 Human information processing, cognitive effects	•	•								
		C.4 Perceptual illusions (visual or physiological) and spatial disorientation, effects of G-loads	•	•								
		C.5 Stress, startle and surprise effect	•	•								
		C.6 Intuitive and counter-intuitive behavior	•	•								

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37	Basic Instrument Flight Module Training	10 hours module is focused on the basics of flying by sole reference to instruments, including limited panel and unusual attitude recovery.	AMC2 to APPENDIX6.							
		All exercises may be performed in an FNPT I or II or an FFS, for a maximum of 5 hours. If instrument flight training is in VMC, a suitable means of simulating IMC for the student should be used.								
		A BITD may be used for the exercises 1, 2, 3, 4, 6, and 8.								
		The use of the BITD is subject to the following: (1) the training should be complemented by exercises on an aeroplane; (2) the record of the parameters of the flight must be available; (3) an FI(A) or IRI(A) should conduct the instruction.								
		(a) Exercise 1:								
		(1) basic instrument flying without external visual cues;								
		(2) horizontal flight; power changes for acceleration or deceleration;								
		(3) maintaining straight and level flight;								
		(4) turns in level flight with 15 ° and 25 ° bank, left and right;								
		(5) roll-out onto predetermined headings.								
		(b) Exercise 2:								
		(1) repetition of exercise 1;								
		(2) additionally climbing, descending, maintaining heading and speed, transition to horizontal flight;								
		(3) climbing and descending turns.								
		(c) Exercise 3:								
		Instrument pattern:								
		(1) start exercise, decelerate to approach speed, flaps into approach configuration;								
		(2) initiate standard turn (left or right);								
		(3) roll out on opposite heading, maintain new heading for 1 minute;								
		(4) standard turn, gear down, descend 500 ft/min;								
		(5) roll out on initial heading, maintain descent (500 ft/min) and new heading for 1 minute;								

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		(6) transition to horizontal flight, 1000 ft below initial flight level;									
		(7) initiate go-around;									
		(8) climb at best rate of climb speed.									
		(d) Exercise 4:	0:45 hours								
		Repetition of exercise 1 and steep turns with 45° bank; recovery from unusual attitudes.									
		(e) Exercise 5:	0:45 hours								
		Repetition of exercise 4.									
		(f) Exercise 6:	0:45 hours								
		(1) radio navigation using VOR, NDB or, if available, VDF;									
		(2) interception of predetermined QDM, QDR.									
		(g) Exercise 7:	0:45 hours								
		Repetition of exercise 1 and recovery from unusual attitudes.									
		(h) Exercise 8:	0:45 hours								
		(1) Repetition of exercise 1;									
		(2) turns, level change and recovery from unusual attitudes with simulated failure of the artificial horizon or directional gyro.									
		(i) Exercise 9:	0:45 hours								
		Recognition of, and recovery from, incipient and full stalls.									
		(j) Exercise 10: Repetition of exercises 6, 8 and 9	3:30 hours								
SE Training (single-pilot single-engine aeroplanes) (If Applicable)											
38	Flight Training Requirement for Skill Test (SE)	1. Departure		TCAR PEL PART FCL APPENDIX 9, B							
		1.1	Preflight including: Documentation, Mass and balance, Weather briefing, NOTAM								
		1.2	Pre-start Checks: 1.2.1 External, 1.2.2 Internal								
		1.3	Engine Starting: Normal malfunctions								
		1.4	Taxiing								
		1.5	Pre-departure Checks: Engine run-up (if applicable)								
		1.6	Take-off Procedure: Normal with flight manual flap settings, Crosswind (if conditions are available)								
		1.7	Climbing: Vx/Vy, Turns onto headings, Level off								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		1.8 ATC Liaison—Compliance, R/T procedures								
		2. Airwork (VMC)								
	2.1	Straight and Level Flight at various airspeeds including flight at critically low airspeed with and without flaps (including approach to V _{mc} when applicable)								
	2.2	Steep Turns (360° left and right at 45° bank)								
	2.3	Stalls and Recovery: Clean stall, Approach to stall in various configurations								
	2.4	Handling Using Autopilot and Flight Director (if applicable)								
	2.5	ATC Liaison — Compliance, R/T procedures								
		3A. En Route Procedures VFR								
	3A.									
	1	Flight Plan, Dead Reckoning, and Map Reading								
	3A.									
	2	Maintenance of Altitude, Heading and Speed								
	3A.									
	3	Orientation, Timing and Revision of ETAs								
	3A.									
	4	Use of Radio Navigation Aids (if applicable)								
	3A.									
	5	Flight Management (flight log, routine checks including fuel, systems, and icing)								
	3A.									
	6	ATC Liaison—Compliance, R/T procedures								
		3B. Instrument Flight								
	3B.1	Includes Departure IFR, En Route IFR, Holding Procedures, 3D and 2D Operations, Flight Exercises, Failure of Localiser or Glideslope, ATC Liaison								
		4. Arrival and Landings								
	4.1	Aerodrome Arrival Procedure								
	4.2	Normal Landing								
	4.3	Flapless Landing								
	4.4	Crosswind Landing (if suitable conditions)								

No.	Regulatory Requirement(s)				Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description		Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		4.5	Approach and Landing with Idle Power from up to 2,000 ft above the runway (single-engine aeroplanes only)								
		4.6	Go-Around from Minimum Height								
		4.7	Night Go-Around and Landing (if applicable)								
		4.8	ATC Liaison Compliance, R/T Procedures								
		5. Abnormal and Emergency Procedures									
		5.1	Rejected Take-Off at a reasonable speed								
		5.2	Simulated Engine Failure after take-off (single-engine aeroplanes only)								
		5.3	Simulated Forced Landing without power (single-engine aeroplanes only)								
		5.4	Simulated Emergencies: Fire or smoke in flight, Systems' malfunctions as appropriate								
		5.6	ATC Liaison — Compliance, R/T procedures								
		6. UPRT									
		7.1	Flight Manoeuvres and Procedures: Manual flight with and without flight directors, at different speeds and altitudes, steep turns using 45° bank, 180° to 360° left and right, turns with and without spoilers, procedural instrument flying and manoeuvring including instrument departure and arrival, and visual approach								
		7.2	Upset Recovery Training: Recovery from stall events in various configurations, recovery from nose-high and nose-low at various bank angles								
		7.3	Go-around with engines operating from various stages during an instrument approach								
		7.4	Rejected landing with all engines operating from various heights below DH/MDH, 15 m (50 ft) above the runway threshold, after touchdown								
39	Syllabus of Theoretical Knowledge for Class or Type Ratings – SE Aeroplanes	Detailed listing for aeroplane structure and equipment, normal operation of systems and malfunctions:		AMC1 FCL.725(a)							
		(1) dimensions: minimum required runway width for 180 ° turn.									
		(2) engine including auxiliary power unit:									
		(i)	type of engine or engines;								
		(ii)	in general, function of the following systems or components:								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		1. engine;								
		2. auxiliary power unit;								
		3. oil system;								
		4. fuel system;								
		5. ignition system;								
		6. starting system;								
		7. fire warning and extinguishing system;								
		8. generators and generator drives;								
		9. power indication;								
		10. reverse thrust;								
		11. water injection.								
		(iii) on piston or turbine-propeller engines additionally:								
		1. propeller system;								
		2. feathering system.								
		(iv) engine controls (including starter), engine instruments and indications in the cockpit, their function, interrelation and interpretation;								
		(v) engine operation, including APU, during engine start, start and engine malfunctions, procedures for normal operation in the correct sequence.								
		(3) fuel system:								
		(i) location of the fuel tanks, fuel pumps, fuel lines to the engines, tank capacities, valves and measuring;								
		(ii) location of the following systems:								
		1. filtering;								
		2. heating;								
		3. fueling and defueling;								
		4. dumping;								
		5. venting.								
		(iii) in the cockpit:								
		1. the monitors and indicators of the fuel system;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		2. quantity and flow indication, interpretation.								
		(iv) procedures:								
		1. fuel procedures distribution into the various tanks;								
		2. fuel supply, temperature control and fuel dumping.								
		(4) pressurisation and air conditioning:								
		(i) components of the system and protection devices;								
		(ii) cockpit monitors and indicators;								
		(iii) interpretation about the operational condition;								
		(iv) normal operation of the system during start, cruise, approach and landing, air conditioning airflow and temperature control.								
		(5) ice and rain protection, windshield wipers and rain repellent:								
		(i) ice protected components of the aeroplane including engines, heat sources, controls and indications;								
		(ii) operation of the anti-icing or de-icing system during take-off, climb, cruise and descent, conditions requiring the use of the protection systems;								
		(iii) controls and indications of the windshield wipers and rain repellent systems operation.								
		(6) hydraulic system:								
		(i) components of the hydraulic system(s), quantities and system pressure, hydraulically actuated components associated to the respective hydraulic system;								
		(ii) controls, monitors and indicators in the cockpit, function and interrelation and interpretation of indications.								
		(7) landing gear:								
		(i) main components of the:								
		1. main landing gear;								
		2. nose gear;								
		3. gear steering;								
		4. wheel brake system, including anti-skid.								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(ii) gear retraction and extension (including changes in trim and drag caused by gear operation);								
		(iii) required tyre pressure, or location of the relevant placard;								
		(iv) controls and indicators including warning indicators in the cockpit in relation to the retraction or extension condition of the landing gear and brakes;								
		(v) components of the emergency extension system.								
		(8) flight controls and high lift devices:								
		(i)								
		1. aileron system;								
		2. elevator system;								
		3. rudder system;								
		4. trim system;								
		5. spoiler system;								
		6. lift devices;								
		7. stall warning system;								
		8. take-off configuration warning system.								
		(ii) flight control system from the cockpit controls to the flight control or surfaces;								
		(iii) controls, monitors and indicators including warning indicators of the systems mentioned under (8) (i), interrelation and dependencies.								
		(9) electrical power supply:								
		(i) number, power, voltage, frequency and location of the main power system (AC or DC), auxiliary power system location and external power system;								
		(ii) location of the controls, monitors and indicators in the cockpit;								
		(iii) flight instruments, communication and navigation systems, main and back-up power sources;								
		(iv) location of vital circuit breakers;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(v) generator operation and monitoring procedures of the electrical power supply.								
		(10) flight instruments, communication, radar and navigation equipment, autoflight and flight data recorders:								
		(i) visible antennae;								
		(ii) controls and instruments of the following equipment in the cockpit during normal operation:								
		1. flight instruments;								
		2. flight management systems;								
		3. radar equipment, including radio altimeter;								
		4. communication and navigation systems;								
		5. autopilot;								
		6. flight data recorder, cockpit voice recorder and data-link communication recording function;								
		7. TAWS;								
		8. collision avoidance system;								
		9. warning systems; and.								
		10. weather radar system, best practices for optimum use, interpretation of displayed information.								
		(11) cockpit, cabin and cargo compartment:								
		(i) operation of the exterior, cockpit, cabin and cargo compartment lighting and the emergency lighting;								
		(ii) operation of the cabin and cargo doors, stairs, windows and emergency exits;								
		(iii) main components of the oxygen system and their location, oxygen masks and operation of the oxygen systems for the crew and passengers, required amount of oxygen by means of a table or diagram.								
		(12) emergency equipment operation and correct application of the following emergency equipment in the aeroplane:								
		(i) portable fire extinguisher;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(ii) first-aid kits;								
		(iii) portable oxygen equipment;								
		(iv) emergency ropes;								
		(v) life-jacket;								
		(vi) life rafts;								
		(vii) emergency transmitters;								
		(viii) crash axes;								
		(ix) megaphones;								
		(x) emergency signals.								
		(13) pneumatic system:								
		(i) components of the pneumatic system, pressure source and actuated components;								
		(ii) controls, monitors and indicators in the cockpit and function of the system;								
		(iii) vacuum system.								
		Limitations:								
		(1) general limitations:								
		(i) certification of the aeroplane, category of operation, noise certification and maximum and minimum performance data for all flight profiles, conditions and aircraft systems:								
		1. maximum tail and crosswind-components at take-off and landing;								
		2. maximum speeds for flap extension v_{fo} ;								
		3. at various flap settings v_{fe} ;								
		4. for landing gear operation v_{lo} , M_{lo} ;								
		5. for extended landing gear v_{le} , M_{le} ;								
		6. for maximum rudder deflection v_a , M_a ;								
		7. for tyres;								
		8. one propeller feathered.								
		(ii)								
		1. minimum control speed air v_{mca} ;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		2. minimum control speed ground vmcg;								
		3. stall speed under various conditions vso, vs1;								
		4. maximum speed vne, Mne;								
		5. maximum speed for normal operation vmo, Mmo;								
		6. altitude and temperature limitations;								
		7. stick shaker activation.								
		(iii)								
		1. maximum airport pressure altitude, runway slope;								
		2. maximum taxi mass;								
		3. maximum take-off mass;								
		4. maximum lift off mass;								
		5. maximum landing mass;								
		6. zero fuel mass;								
		7. maximum dumping speed vdco, Mdco, vdce, Mdce;								
		8. maximum load factor during operation;								
		9. certificated range of centre of gravity.								
		(2) engine limitations:								
		(i) operating data of the engines:								
		1. time limits and maximum temperatures;								
		2. minimum RPMs and temperatures;								
		3. torque;								
		4. maximum power for take-off and go-around on pressure altitude or flight altitude and temperature;								
		5. piston engines: certified range of mixture;								
		6. minimum and maximum oil temperature and pressure;								
		7. maximum starter time and required cooling;								
		8. time between two start attempts for engines and auxiliary power unit;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		9. for propeller: maximum RPM of propeller triggering of automatic feathering device.								
		(ii) certified oil grades.								
		(3) systems limitations:								
		(i) operating data of the following systems:								
		1. pressurisation, air conditioning maximum pressures;								
		2. electrical power supply, maximum load of main power system (AC or DC);								
		3. maximum time of power supply by battery in case of emergency;								
		4. Mach trim system and yaw damper speed limits;								
		5. autopilot limitations of various modes;								
		6. ice protection;								
		7. speed and temperature limits of window heat;								
		8. temperature limits of engine and wing anti-ice.								
		(ii) fuel system: certified fuel specifications, minimum and maximum pressures and temperature of the fuel.								
		(4) minimum equipment list.								
		Performance, flight planning and monitoring:								
		(1) performance calculation about speeds, gradients, masses in all conditions for take-off, en-route, approach and landing according to the documentation available (for example for take-off V_1 , V_{mbe} , V_r , V_{lof} , V_2 , take-off distance, maximum take-off mass and the required stop distance) on the following factors:								
		(i) accelerate or stop distance;								
		(ii) take-off run and distance available (TORA, TODA);								
		(iii) ground temperature, pressure altitude, slope, wind;								
		(iv) maximum load and maximum mass (for example ZFM);								
		(v) minimum climb gradient after engine failure;								
		(vi) influence of snow, slush, moisture and standing water on the runway;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(vii) possible single or dual engine failure during cruise flight;								
		(viii) use of anti-icing systems;								
		(ix) failure of water injection system or antiskid system;								
		(x) speeds at reduced thrust, V_1 , V_{1red} , V_{mbe} , V_{mu} , V_r , V_{lof} , V_2 ;								
		(xi) safe approach speed V_{ref} on V_{mca} and turbulent conditions;								
		(xii) effects of excessive approach speed and abnormal glideslope on the landing distance;								
		(xiii) minimum climb gradient during approach and landing;								
		(xiv) limiting values for a go-around with minimum fuel;								
		(xv) maximum allowable landing mass and the landing distance for the destination and alternate aerodrome on the following factors:								
		1. available landing distance;								
		2. ground temperature, pressure altitude, runway slope and wind;								
		3. fuel consumption to destination or alternate aerodrome;								
		4. influence of moisture on the runway, snow, slush and standing water;								
		5. failure of the water injection system or the anti-skid system;								
		6. influence of thrust reverser and spoilers.								
		(2) flight planning for normal and abnormal conditions:								
		(i) optimum or maximum flight level;								
		(ii) minimum required flight altitude;								
		(iii) drift down procedure after an engine failure during cruise flight;								
		(iv) power setting of the engines during climb, cruise and holding under various circumstances, as well as the most economic cruising flight level;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(v) calculation of a short range or long range flight plan;								
		(vi) optimum and maximum flight level and power setting of the engines after engine failure.								
		(3) flight monitoring.								
		Load and balance and servicing:								
		(1) load and balance:								
		(i) load and trim sheet on the maximum masses for take-off and landing;								
		(ii) centre of gravity limits;								
		(iii) influence of fuel consumption on the centre of gravity;								
		(iv) lashing points, load clamping, maximum ground load.								
		(2) servicing on ground, servicing connections for:								
		(i) fuel;								
		(ii) oil;								
		(iii) water;								
		(iv) hydraulic;								
		(v) oxygen;								
		(vi) nitrogen;								
		(vii) conditioned air;								
		(viii) electric power;								
		(ix) start air;								
		(x) toilet and safety regulations.								
		Emergency procedures:								
		(1) recognition of the situation as well as immediate memory actions in correct sequence and for those conditions recognised as emergencies by the manufacturer and the CAAT for certification:								
		(i) engine failure during take-off before and after v_1 , as well as in-flight;								
		(ii) malfunctions of the propeller system;								
		(iii) engine overheat, engine fire on ground and in-flight;								
		(iv) wheel well fire;								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(v) electrical smoke or fire;								
		(vi) rapid decompression and emergency descent;								
		(vii) air-conditioning overheat, anti-ice system overheat;								
		(viii) fuel pump failure;								
		(ix) fuel freezing overheat;								
		(x) electric power failure;								
		(xi) equipment cooling failure;								
		(xii) flight instrument failure;								
		(xiii) partial or total hydraulic failure;								
		(xiv) failures at the lift devices and flight controls including boosters;								
		(xv) cargo compartment smoke or fire.								
		(2) actions according to the approved abnormal and emergency checklist:								
		(i) engine restart in-flight;								
		(ii) landing gear emergency extension;								
		(iii) application of the emergency brake system;								
		(iv) emergency extension of lift devices;								
		(v) fuel dumping;								
		(vi) emergency descent.								
		Special requirements for 'glass cockpit' aeroplanes with EFIS								
		Additional learning objectives:								
		(1) general rules of aeroplanes computer hardware and software design;								
		(2) logic of all crew information and alerting systems and their limitations;								
		(3) interaction of the different aeroplane computer systems, their limitations, the possibilities of computer fault recognition and the actions to be performed on computer failures;								
		(4) normal procedures including all crew coordination duties;								
		(5) aeroplane operation with different computer degradations (basic flying).								
		Flight management systems.								
ME Training (single-pilot multi-engine aeroplanes) (If Applicable)										

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
40	General Requirement	<i>Unless otherwise determined in the operational suitability data established in accordance with EASA Part 21 or any equivalent material established in accordance with Type certification regulations acceptable to the CAAT</i>								
		For single-pilot multi-engine aeroplanes								
		(1) The theoretical knowledge course for a single-pilot multi-engine class rating shall include at least 7 hours of instruction in multi-engine aeroplane operations, and	TCAR PEL PART FCL FCL.725.A							
		(2) The flight training course for a single-pilot multi-engine class or type rating shall include at least 2 hours and 30 minutes of dual flight instruction under normal conditions of multi-engine aeroplane operations, and not less than 3 hours 30 minutes of dual flight instruction in engine failure procedures and asymmetric flight techniques.								
41	Flight Training Requirement for Skill Test (ME)	1. Departure								
		1.1 Preflight including: Documentation, Mass and balance, Weather briefing, NOTAM	TCAR PEL PART FCL, APPENDIX 9, B							
		1.2 Pre-start Checks: 1.2.1 External, 1.2.2 Internal								
		1.3 Engine Starting: Normal malfunctions								
		1.4 Taxiing								
		1.5 Pre-departure Checks: Engine run-up (if applicable)								
		1.6 Take-off Procedure: Normal with flight manual flap settings, Crosswind (if conditions are available)								
		1.7 Climbing: Vx/Vy, Turns onto headings, Level off								
		1.8 ATC Liaison—Compliance, R/T procedures								
		2. Airwork (VMC)								
		2.1 Straight and Level Flight at various airspeeds including flight at critically low airspeed with and without flaps (including approach to V _{mc} when applicable)								
		2.2 Steep Turns (360° left and right at 45° bank)								
		2.3 Stalls and Recovery: Clean stall, Approach to stall in various configurations								
		2.4 Handling Using Autopilot and Flight Director (if applicable)								
		2.5 ATC Liaison — Compliance, R/T procedures								
		3A. En Route Procedures VFR								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		3A.1 Flight Plan, Dead Reckoning, and Map Reading								
		3A.2 Maintenance of Altitude, Heading and Speed								
		3A.3 Orientation, Timing and Revision of ETAs								
		3A.4 Use of Radio Navigation Aids (if applicable)								
		3A.5 Flight Management (flight log, routine checks including fuel, systems, and icing)								
		3A.6 ATC Liaison—Compliance, R/T procedures								
		3B. Instrument Flight								
		3B.1 Includes Departure IFR, En Route IFR, Holding Procedures, 3D and 2D Operations, Flight Exercises, Failure of Localiser or Glideslope, ATC Liaison								
		4. Arrival and Landings								
		4.1 Aerodrome Arrival Procedure								
		4.2 Normal Landing								
		4.3 Flapless Landing								
		4.4 Crosswind Landing (if suitable conditions)								
		4.5 Approach and Landing with Idle Power from up to 2,000 ft above the runway (single-engine aeroplanes only)								
		4.6 Go-Around from Minimum Height								
		4.7 Night Go-Around and Landing (if applicable)								
		4.8 ATC Liaison Compliance, R/T Procedures								
		5. Abnormal and Emergency Procedures								
		5.1 Rejected Take-Off at a reasonable speed								
		5.2 Simulated Engine Failure after take-off (single-engine aeroplanes only)								
		5.3 Simulated Forced Landing without power (single-engine aeroplanes only)								
		5.4 Simulated Emergencies: Fire or smoke in flight, Systems' malfunctions as appropriate								

No.	Regulatory Requirement(s)				Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description		Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		5.5	ME aeroplanes and TMG training only: engine shutdown and restart (at a safe altitude if performed in the aircraft)								
		5.6	ATC Liaison — Compliance, R/T procedures								
		6. Simulated Asymmetric Flight									
		6.1	Simulated engine failure during take-off (at a safe altitude unless carried out in an FFS or an FNPT II)								
		6.2	Asymmetric approach and go-around								
		6.3	Asymmetric approach and full-stop landing								
		6.4	ATC Liaison—Compliance, R/T procedures								
		7. UPRT									
		7.1	Flight Manoeuvres and Procedures: Manual flight with and without flight directors, at different speeds and altitudes, steep turns using 45° bank, 180° to 360° left and right, turns with and without spoilers, procedural instrument flying and manoeuvring including instrument departure and arrival, and visual approach								
		7.2	Upset Recovery Training: Recovery from stall events in various configurations, recovery from nose-high and nose-low at various bank angles								
		7.3	Go-around with engines operating from various stages during an instrument approach								
		7.4	Rejected landing with all engines operating from various heights below DH/MDH, 15 m (50 ft) above the runway threshold, after touchdown								
42	Syllabus of Theoretical Knowledge for Class or Type Ratings – ME Aeroplanes	Detailed listing for aeroplane structure and equipment, normal operation of systems and malfunctions:		AMC1 FCL.725(a)							
		(1) dimensions: minimum required runway width for 180 ° turn.									
		(2) engine including auxiliary power unit:									
		(i) type of engine or engines;									
		(ii) in general, function of the following systems or components:									
		1. engine;									
		2. auxiliary power unit;									
		3. oil system;									
		4. fuel system;									

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		5. ignition system;								
		6. starting system;								
		7. fire warning and extinguishing system;								
		8. generators and generator drives;								
		9. power indication;								
		10. reverse thrust;								
		11. water injection.								
		(iii) on piston or turbine-propeller engines additionally:								
		1. propeller system;								
		2. feathering system.								
		(iv) engine controls (including starter), engine instruments and indications in the cockpit, their function, interrelation and interpretation;								
		(v) engine operation, including APU, during engine start, start and engine malfunctions, procedures for normal operation in the correct sequence.								
		(3) fuel system:								
		(i) location of the fuel tanks, fuel pumps, fuel lines to the engines, tank capacities, valves and measuring;								
		(ii) location of the following systems:								
		1. filtering;								
		2. heating;								
		3. fueling and defueling;								
		4. dumping;								
		5. venting.								
		(iii) in the cockpit:								
		1. the monitors and indicators of the fuel system;								
		2. quantity and flow indication, interpretation.								
		(iv) procedures:								
		1. fuel procedures distribution into the various tanks;								
		2. fuel supply, temperature control and fuel dumping.								

No.	Regulatory Requirement(s)			Compliance checked by ATO				CAAT Officials Use Only		
	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(4) pressurisation and air conditioning:								
		(i) components of the system and protection devices;								
		(ii) cockpit monitors and indicators;								
		(iii) interpretation about the operational condition;								
		(iv) normal operation of the system during start, cruise, approach and landing, air conditioning airflow and temperature control.								
		(5) ice and rain protection, windshield wipers and rain repellent:								
		(v) ice protected components of the aeroplane including engines, heat sources, controls and indications;								
		(vi) operation of the anti-icing or de-icing system during take-off, climb, cruise and descent, conditions requiring the use of the protection systems;								
		(vii) controls and indications of the windshield wipers and rain repellent systems operation.								
		(6) hydraulic system:								
		(i) components of the hydraulic system(s), quantities and system pressure, hydraulically actuated components associated to the respective hydraulic system;								
		(ii) controls, monitors and indicators in the cockpit, function and interrelation and interpretation of indications.								
		(7) landing gear:								
		(i) main components of the:								
		1. main landing gear;								
		2. nose gear;								
		3. gear steering;								
		4. wheel brake system, including anti-skid.								
		(ii) gear retraction and extension (including changes in trim and drag caused by gear operation);								
		(iii) required tyre pressure, or location of the relevant placard;								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(iv) controls and indicators including warning indicators in the cockpit in relation to the retraction or extension condition of the landing gear and brakes;								
		(v) components of the emergency extension system.								
		(8) flight controls and high lift devices:								
		(i)								
		1. aileron system;								
		2. elevator system;								
		3. rudder system;								
		4. trim system;								
		5. spoiler system;								
		6. lift devices;								
		7. stall warning system;								
		8. take-off configuration warning system.								
		(ii) flight control system from the cockpit controls to the flight control or surfaces;								
		(iii) controls, monitors and indicators including warning indicators of the systems mentioned under (8) (i), interrelation and dependencies.								
		(9) electrical power supply:								
		(i) number, power, voltage, frequency and location of the main power system (AC or DC), auxiliary power system location and external power system;								
		(ii) location of the controls, monitors and indicators in the cockpit;								
		(iii) flight instruments, communication and navigation systems, main and back-up power sources;								
		(iv) location of vital circuit breakers;								
		(v) generator operation and monitoring procedures of the electrical power supply.								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(10) flight instruments, communication, radar and navigation equipment, autoflight and flight data recorders:								
		(i) visible antennae;								
		(ii) controls and instruments of the following equipment in the cockpit during normal operation:								
		1. flight instruments;								
		2. flight management systems;								
		3. radar equipment, including radio altimeter;								
		4. communication and navigation systems;								
		5. autopilot;								
		6. flight data recorder, cockpit voice recorder and data-link communication recording function;								
		7. TAWS;								
		8. collision avoidance system;								
		9. warning systems; and.								
		10. weather radar system, best practices for optimum use, interpretation of displayed information.								
		(11) cockpit, cabin and cargo compartment:								
		(i) operation of the exterior, cockpit, cabin and cargo compartment lighting and the emergency lighting;								
		(ii) operation of the cabin and cargo doors, stairs, windows and emergency exits;								
		(iii) main components of the oxygen system and their location, oxygen masks and operation of the oxygen systems for the crew and passengers, required amount of oxygen by means of a table or diagram.								
		(12) emergency equipment operation and correct application of the following emergency equipment in the aeroplane:								
		(i) portable fire extinguisher;								
		(ii) first-aid kits;								
		(iii) portable oxygen equipment;								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(iv) emergency ropes;								
		(v) life-jacket;								
		(vi) life rafts;								
		(vii) emergency transmitters;								
		(viii) crash axes;								
		(ix) megaphones;								
		(x) emergency signals.								
		(13) pneumatic system:								
		(xi) components of the pneumatic system, pressure source and actuated components;								
		(xii) controls, monitors and indicators in the cockpit and function of the system;								
		(xiii) vacuum system.								
		Limitations:								
		(14) general limitations:								
		(i) certification of the aeroplane, category of operation, noise certification and maximum and minimum performance data for all flight profiles, conditions and aircraft systems:								
		1. maximum tail and crosswind-components at take-off and landing;								
		2. maximum speeds for flap extension v_{fo} ;								
		3. at various flap settings v_{fe} ;								
		4. for landing gear operation v_{lo} , M_{lo} ;								
		5. for extended landing gear v_{le} , M_{le} ;								
		6. for maximum rudder deflection v_a , M_a ;								
		7. for tyres;								
		8. one propeller feathered.								
		(ii)								
		1. minimum control speed air v_{mca} ;								
		2. minimum control speed ground v_{mcg} ;								
		3. stall speed under various conditions v_{so} , v_{s1} ;								

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		4. maximum speed vne, Mne;								
		5. maximum speed for normal operation vmo, Mmo;								
		6. altitude and temperature limitations;								
		7. stick shaker activation.								
		(iii)								
		1. maximum airport pressure altitude, runway slope;								
		2. maximum taxi mass;								
		3. maximum take-off mass;								
		4. maximum lift off mass;								
		5. maximum landing mass;								
		6. zero fuel mass;								
		7. maximum dumping speed vdco, Mdco, vdce, Mdce;								
		8. maximum load factor during operation;								
		9. certificated range of centre of gravity.								
		(15) engine limitations:								
		(i) operating data of the engines:								
		1. time limits and maximum temperatures;								
		2. minimum RPMs and temperatures;								
		3. torque;								
		4. maximum power for take-off and go-around on pressure altitude or flight altitude and temperature;								
		5. piston engines: certified range of mixture;								
		6. minimum and maximum oil temperature and pressure;								
		7. maximum starter time and required cooling;								
		8. time between two start attempts for engines and auxiliary power unit;								
		9. for propeller: maximum RPM of propeller triggering of automatic feathering device.								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(ii) certified oil grades.								
		(16) systems limitations:								
		(i) operating data of the following systems:								
		1. pressurisation, air conditioning maximum pressures;								
		2. electrical power supply, maximum load of main power system (AC or DC);								
		3. maximum time of power supply by battery in case of emergency;								
		4. Mach trim system and yaw damper speed limits;								
		5. autopilot limitations of various modes;								
		6. ice protection;								
		7. speed and temperature limits of window heat;								
		8. temperature limits of engine and wing anti-ice.								
		(ii) fuel system: certified fuel specifications, minimum and maximum pressures and temperature of the fuel.								
		(17) minimum equipment list.								
		Performance, flight planning and monitoring:								
		(18) performance calculation about speeds, gradients, masses in all conditions for take-off, en-route, approach and landing according to the documentation available (for example for take-off V_1 , V_{mbe} , V_r , V_{lof} , V_2 , take-off distance, maximum take-off mass and the required stop distance) on the following factors:								
		(i) accelerate or stop distance;								
		(ii) take-off run and distance available (TORA, TODA);								
		(iii) ground temperature, pressure altitude, slope, wind;								
		(iv) maximum load and maximum mass (for example ZFM);								
		(v) minimum climb gradient after engine failure;								
		(vi) influence of snow, slush, moisture and standing water on the runway;								
		(vii) possible single or dual engine failure during cruise flight;								
		(viii) use of anti-icing systems;								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(ix) failure of water injection system or antiskid system;								
		(x) speeds at reduced thrust, V_1 , V_{1red} , V_{mbe} , V_{mu} , V_r , V_{lof} , V_2 ;								
		(xi) safe approach speed V_{ref} on V_{mca} and turbulent conditions;								
		(xii) effects of excessive approach speed and abnormal glideslope on the landing distance;								
		(xiii) minimum climb gradient during approach and landing;								
		(xiv) limiting values for a go-around with minimum fuel;								
		(xv) maximum allowable landing mass and the landing distance for the destination and alternate aerodrome on the following factors:								
		1. available landing distance;								
		2. ground temperature, pressure altitude, runway slope and wind;								
		3. fuel consumption to destination or alternate aerodrome;								
		4. influence of moisture on the runway, snow, slush and standing water;								
		5. failure of the water injection system or the anti-skid system;								
		6. influence of thrust reverser and spoilers.								
		(19) flight planning for normal and abnormal conditions:								
		(i) optimum or maximum flight level;								
		(ii) minimum required flight altitude;								
		(iii) drift down procedure after an engine failure during cruise flight;								
		(iv) power setting of the engines during climb, cruise and holding under various circumstances, as well as the most economic cruising flight level;								
		(v) calculation of a short range or long range flight plan;								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(vi) optimum and maximum flight level and power setting of the engines after engine failure.								
		(20) flight monitoring.								
		Load and balance and servicing:								
		(21) load and balance:								
		(i) load and trim sheet on the maximum masses for take-off and landing;								
		(ii) centre of gravity limits;								
		(iii) influence of fuel consumption on the centre of gravity;								
		(iv) lashing points, load clamping, maximum ground load.								
		(22) servicing on ground, servicing connections for:								
		(i) fuel;								
		(ii) oil;								
		(iii) water;								
		(iv) hydraulic;								
		(v) oxygen;								
		(vi) nitrogen;								
		(vii) conditioned air;								
		(viii) electric power;								
		(ix) start air;								
		(x) toilet and safety regulations.								
		Emergency procedures:								
		(23) recognition of the situation as well as immediate memory actions in correct sequence and for those conditions recognised as emergencies by the manufacturer and the CAAT for certification:								
		(i) engine failure during take-off before and after v_1 , as well as in-flight;								
		(ii) malfunctions of the propeller system;								
		(iii) engine overheat, engine fire on ground and in-flight;								
		(iv) wheel well fire;								
		(v) electrical smoke or fire;								

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
		(vi) rapid decompression and emergency descent;								
		(vii) air-conditioning overheat, anti-ice system overheat;								
		(viii) fuel pump failure;								
		(ix) fuel freezing overheat;								
		(x) electric power failure;								
		(xi) equipment cooling failure;								
		(xii) flight instrument failure;								
		(xiii) partial or total hydraulic failure;								
		(xiv) failures at the lift devices and flight controls including boosters;								
		(xv) cargo compartment smoke or fire.								
		(24) actions according to the approved abnormal and emergency checklist:								
		(i) engine restart in-flight;								
		(ii) landing gear emergency extension;								
		(iii) application of the emergency brake system;								
		(iv) emergency extension of lift devices;								
		(v) fuel dumping;								
		(vi) emergency descent.								
		Special requirements for ‘glass cockpit’ aeroplanes with EFIS								
		Additional learning objectives:								
		(25) general rules of aeroplanes computer hardware and software design;								
		(26) logic of all crew information and alerting systems and their limitations;								
		(27) interaction of the different aeroplane computer systems, their limitations, the possibilities of computer fault recognition and the actions to be performed on computer failures;								
		(28) normal procedures including all crew coordination duties;								
		(29) aeroplane operation with different computer degradations (basic flying).								
		Flight management systems.								
Theoretical Knowledge and Flight Training for CPL(A)										

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	Subject	Description	Reference	Yes	No	N/A	Reference (Section/Chapter/ Page/Topic No.)	S	U	Remark
43	Demonstration of knowledge and subjects covered	An applicant for a CPL shall demonstrate a level of knowledge appropriate to the privileges granted in the following subjects: (a) subject 010 air law (b) subject 021 aircraft general knowledge — airframe, systems and power plant (c) subject 022 aircraft general knowledge — instrumentation (d) subject 031 flight performance and planning — mass and balance (e) subject 032 flight performance and planning — performance — aeroplanes (f) subject 033 flight performance and planning — flight planning and monitoring (g) subject 034 flight performance and planning — performance — helicopters (h) subject 040 human performance and limitations (i) subject 050 meteorology (j) subject 061 navigation — general navigation (k) subject 062 navigation — radio navigation (l) subject 070 operational procedures (m) subject 081 principles of flight — aeroplanes (n) subject 082 principles of flight — helicopters (o) subject 090 radio communications (p) subject area 100 knowledge, skills and attitudes (ksa) (Postponed, See cover regulation)	TCAR PEL PART FCL FCL.310 AMC1 FCL.310; FCL.515(b); FCL615(b) Appendix to AMC1 FCL.310; FCL.515(b); FCL615(b)							
44	Instructional Methods and Activities	The 350 hours of instruction, which also cover the Area 100 KSA (Postponed, See cover regulation), may include in suitable proportions: (1) classroom work; (2) lessons; (3) tutorials; (4) demonstrations, including those supported by demonstration equipment; (5) exercises carried out as groups or individuals and based on pre-flight and en-route planning, communications, presentations and projects; (6) exercises that use demonstration equipment or training devices; (7) directed study including workbook exercises or assignments; (8) aerodrome or aviation industry field trips; (9) computer-based training and e-learning elements; (10) progress tests, Area 100 KSA assessments and mental maths test(s); and	AMC1 to APPENDIX3, D., (c)							

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		(Postponed, See cover regulation) (11) other training methods, media and tools approved by the CAAT.								
	Theoretical knowledge Examination Requirement (Class Rating)									
45	Theoretical knowledge Examination Requirement	The applicant for a class or type rating shall pass a theoretical knowledge examination organised by the ATO to demonstrate the level of theoretical knowledge required for the safe operation of the applicable aircraft class or type.	TCAR PEL PART FCL FCL.725							
		For single-pilot multi-engine aircraft, the theoretical knowledge examination shall be written and the number of multiple-choice questions shall depend on the complexity of the aircraft.								
		For single-engine aircraft, the theoretical knowledge examination shall be conducted verbally by the examiner during the skill test to determine whether or not a satisfactory level of knowledge has been achieved.								
	Skill Test Requirement									
46	CPL(A) Skill Test Requirement	Before a skill test for the issue of a licence, rating or certificate is taken, the applicant applicants shall have passed the required theoretical knowledge examination, except in the case of applicants undergoing a course of integrated flying training. In any case, the theoretical knowledge instruction shall always have been completed before the skill tests are taken.	TCAR PEL PART FCL FCL.030							
		Except for the issue of an airline transport pilot licence, the applicant applicants for a skill test shall be recommended for the test by the organisation ATO, DTO or person responsible for the training, once the training is completed. The training records shall be made available to the examiner.								
		Upon completion of the flying training the applicant shall take the CPL(A) skill test on a single-engine or a multi-engine aeroplane.	TCAR PEL PART FCL APPENDIX 3, D., 9.							
47	Skill Test Requirement for Class Rating	An applicant for the issue of a class or type rating shall pass a skill test in accordance with Appendix 9 to this Part regulation to demonstrate the skill required for the safe operation of the applicable class or type of aircraft.	TCAR PEL PART FCL FCL.725							